The Impact of Religiosity on Audit Pricing

Stergios Leventis*
School of Economics and Business Administration
International Hellenic University
14th klm Thessaloniki-Moudania
57101 Thessaloniki, Greece

Tel: +30 231 080-7541
Fax: +30 231 047-4520
E-mail: s.leventis@ihu.edu.gr

Emmanouil Dedoulis
Department of Business Administration
Athens University of Economics and Business
76, Patission Street
104-34 Athens, Greece

Tel: + 30 210 820-3453
Fax: + 30 210 823-0966
E-mail: ededoulis@aueb.gr

Omneya Abdelsalam
Durham University Business School
Mill Hill Lane
DH1 3LB, Durham, UK

Tel: +44 191 33 46345
Fax: +44 191 33 45201
E-mail: O.h.abdelsalam@Durham.ac.uk

*Corresponding author

Acknowledgments: We acknowledge helpful comments by two anonymous reviewers and the editor, Domenec Mele, Costas Caramanis, Sandra Cohen, Xiaohua Fang, Raphael Markellos, Nikos Vafeas, Pauline Weetman and Luke Watson. We thank Arthur Allen for directions and data on the 150-hour rule. The paper has also benefited from the comments of participants at the Amsterdam Business School, Aston Business School, Norwich Business School, and the 17th Annual Financial Reporting and Business Communication Conference, Bristol.

The Impact of Religiosity on Audit Pricing

Abstract

Prior literature has demonstrated that religiosity is associated with a reduced acceptance of unethical business practices and financial reporting irregularities. On this premise, we examine whether religiosity, conceptualized as the degree of adherence to religious norms in the geographical area where a firm's headquarters is located, has an impact on audit firms' pricing decisions in the US. We measure the intensity of religiosity by the number of adherents relative to the total population in a county and we demonstrate that increased religious adherence operates as an institutionalized monitoring mechanism that decreases audit risk and audit costs, which is, in turn, reflected in reduced audit pricing. Additional tests suggest that the impact of religiosity on auditors' pricing decisions is not differentiated by levels of auditor expertise but that audit fees are determined by an auditor's relative location in a market sector and religious adherence. We conclude that religious adherence reduces the need for shareholders to bear the costs of monitoring agents, a finding which could be of importance for market participants and regulators.

Keywords: Agency costs, audit fees, audit pricing, religiosity.

JEL Classification: G21, G30, G34, G38, M41.

Introduction

The influential role of religious adherence in shaping economic behavior has long been discussed by influential thinkers such as Adam Smith (Smith [1759], 1976) and Weber (1905). More recently, social scientists have provided overwhelming evidence to suggest that religiosity, conceptualized as the degree to which an individual adheres to the values, beliefs and practices promulgated by religion, plays a major role in affecting individual values, beliefs and economic choices (Barnett et al., 1996; Innaccone, 1998; Kennedy and Lawton, 1998; Lehrer, 2004; Shukor and Jamal, 2013; Vitell, 2009; Weaver and Angle, 2002). In particular, scholars have demonstrated that religious individuals are more likely to adopt honest attitudes (Bloodgood et al. 2008; Mazar et al., 2008; Walker et al., 2012), be more concerned about corporations' social responsiveness in societies (Brammer et al., 2007) and to prioritize ethics in everyday decision making, thus marginalizing their own self-interests (Hunt and Vitell, 1986). Accordingly, although prior literature does not claim that ethical attitudes are exclusively determined by religious adherence (for instance, see Kurpis et al., 2008; Peterson et al., 2010; Rashid and Ibrahim, 2008), it does clearly demonstrate that religious adherence is positively associated with ethical behavior (Vitell, 2009).

While the literature has long illuminated the role of religiosity[1] in influencing individual economic attitudes, only recently has an investigation of the impact of religious adherence on corporate decision-making emerged. This is the result of a three-fold trend. Firstly, economists have begun demonstrating the fundamental impact of religiosity on core economic matters (Barro and McCleary, 2003; Innaccone, 1998; La Porta et al., 1999; Stulz and Williamson, 2003). Secondly, the role of religion has become more influential in the US [2] and internationally (Innaccone, 1998; Tracey, 2012). Thirdly, influential religious groups, comprising of

Muslims, Christians and Jews, have issued a common code of ethics for international business (Interfaith Declaration, 1994). This indicates a clear tendency to converge on certain ethical values and promulgate justice, fairness, transparency and accountability as the main interfaith pillars of corporate ethics and responsibilities (ICCR, 2010; 2015; Webley, 1996).

This emerging branch of literature demonstrates that religiosity has an impact on investors' portfolio choices and stock returns (Kumar et al., 2011). Hilary and Hui (2009) show that companies located in more religious areas have lower profit volatility and lower investment rates and growth, but greater profitability. Such companies generate a more positive market reaction when they announce new investments (ibid.). Additionally, religiosity is argued to operate as an institutionalized mechanism through which risk-averse (Miller and Hoffman, 1995; Osoba, 2003), anti-manipulative attitudes (Callen and Fang, 2015) are disseminated and reinforced. Hence, in more religious contexts, corporate behavior becomes more socially responsive (Angelidis and Ibrahim, 2004; Guiso et al., 2006).

One wonders, as a result of this literature, whether religiosity plays any role in accounting and/or auditing decisions and, although such an investigation has been considered vital (Sunder, 2005), relevant research is nevertheless in its infancy (Dyreng et al., 2012). The limited research conducted thus far has provided strong evidence of the influential role of religious adherence in financial reporting decisions. While acknowledging that corporate failures and malpractice do take place even in highly religious locations, this stream of literature underlines that the frequency of corporate failures and malpractice intensifies in less religious locations (Kanagaretnam et al., 2014). Conroy and Emerson (2004) and Longenecker et al. (2004) demonstrate that accounting manipulations are less likely to be conducted by

firms headquartered in more religious geographical areas. Moreover, recent evidence suggests that fewer incidences of financial reporting irregularities and tax sheltering, lower accounting risk, and a lower likelihood of accounting restatements occur in contexts characterized by high religious adherence (Dyreng et al., 2012; Grullon et al., 2010; McGuire et al., 2012). Dyreng et al. (2012) additionally find that capital market participants respond to reported good news on earnings in a manner that is consistent with investors acknowledging the role of religiosity in curbing aggressive financial reporting.

By focusing on the auditing realm, Omer et al. (2015) shed light on the relationship between religiosity and auditing practice. They demonstrate that, in more religious contexts, auditors show higher professional skepticism which enables them to exhibit a greater determination to resist client pressure to withhold going concern opinions. In a similar vein, Basioudis et al. (2014) examine the impact of religiosity on non-audit fees and auditors' propensity to issue going concern opinions. They suggest that auditors in more religious US counties are highly likely to be more independent. Jaggi and Xin (2014) document that, in highly religious environments, auditors adopt strong ethical and risk-averse attitudes when accepting risky clients; these attitudes then affect audit pricing policies. Finally, Jha and Chen (2015) find that there is a strong association between firms headquartered in US counties with high social capital, i.e. high mutual trust, and audit fees and briefly evaluate the negative association between religiosity and audit pricing policies.

Considering insights provided by previous studies, we embark upon an examination of the impact of religiosity on audit fees at a firm-level. Religiosity can be operationalized in two main ways, which are inextricably linked to the research focus. Prior studies, which put the individual at the epicenter of the analysis, primarily

employ tools such as (electronic or mail) surveys and interviews to measure aspects of individual religiosity, i.e. belief, practice, formal membership, informal affiliation, ritual initiation, doctrinal knowledge, moral sense and core values (Barro and McCleary, 2003; Doran and Natale, 2011, Keller et al., 2007; Lynn et al., 2009; McAndrew and Voas, 2011; Roberts and Yamane, 2012; Shukor and Jamal, 2013; Walker et al., 2012; Zwingmann et al., 2011).

However, researchers interested in studying religiosity at a firm-level operationalize it by employing variables which measure the number of sites for religious activities (e.g. churches, mosques, etc.), the religious population as a proportion of the total population, and/or the extent of religious participation within the county or region where the firm is headquartered (Boone et al., 2013; Callen and Fang, 2015; Chourou, 2014; Dyreng et al., 2012; Grullon et al., 2010; Hilary and Hui, 2009; Kumar et al., 2011). These studies have employed the county-location of corporate headquarters as a basis for the operationalization of company location (see also Kedia and Rajgopal, 2011; Kose et al., 2011; Loughran and Schultz, 2005; McGuire et al., 2012; Rubbin, 2008).

Since our main objective is to decipher the effect of religiosity on audit pricing at a firm-level in the US, we follow the latter stream of literature (Boone et al., 2013; Callen and Fang, 2015; Chourou, 2013; Dyreng et al., 2012; Grullon et al., 2010; Hilary and Hui, 2009; Kumar et al., 2011). Hence, we measure the degree of religiosity in the county where a firm's headquarters is located, i.e. the number of adherents relative to the total county population. We mainly rely on Religious Congregations and Membership Studies (RCMS), as distributed by the American Religion Data Archive, to measure religiosity. Our data refer to 141.372(150.686) million adherents across all US counties for the year 2003(2010). We also employ

data from the Pew Forum and the Religious Landscape Survey to develop additional religiosity measures. Thus, based on a sample of 35,957 adults, we develop four additional proxies related to: a) the importance of religion in people's lives, b) the frequency of attendance at worship services, c) the frequency of prayer and d) the absolute certainty of belief in God. Our final sample comprises of 1,272 US-listed firms for an eight-year estimation window (2003-2010).

There are concurrent and complementary studies to ours in the literature (Jaggi and Xin, 2014; Jha and Chen, 2015; Omer et al. 2015). However, our study significantly differs from previous works in a number of ways. While Jaggi and Xin (2014) document an inverse relation between religious norms and audit pricing by considering the level of religious values of the counties where auditors are located, our study considers the religious values of the counties where corporate headquarters are located, while sensitivity testing the level of religiosity at the auditor location. Moreover, we also employ alternative measures of religiosity and incorporate extensions relating to auditor spatial competition and industry expertise. Omer et al. (2015) mainly implement a different operationalization of audit quality to the one we employ in this study. While they examine the impact of religiosity on the propensity of auditors to issue a going concern opinion, we focus on audit pricing. Finally, while Jha and Chen (2015) only briefly consider the role of religiosity on audit pricing (since their main focus is on social capital), our study focuses on the impact of religiosity on audit risk and discusses how religiosity acts as an institutional monitoring mechanism that reduces audit costs, i.e. resource and expected loss components.

Our study contributes to the current literature in a number of ways. The primary contribution is the finding that religiosity impacts on audit fees. The

importance of this is that, while previous literature has primarily focused on company- and audit-specific variables (e.g. Bierstaker et al., 2006; Causholli et al., 2010; Hay et al., 2006), we extend prior understandings by bringing to the fore a non-market factor, namely religiosity, which is related to the broader institutional context and lies beyond the immediate control of managers or auditors. Secondly, our analysis verifies previous findings that religiosity acts as an external monitoring device which is related to risk-averse and conservative investment policies at a firm-level. Thus, religiosity is related to reduced agency costs which benefit shareholders in companies located in more religious areas. In this sense, we draw attention to the substitutive rather than complementary role of the institutionalized control quality of religiosity in relation to auditing. This finding extends research that investigates the impact of external monitoring on audit practices and research that examines the influence of religious adherence on corporate policies. Finally, we further understandings of the determination of audit fee levels by incorporating the level of auditor expertise and the auditor's relative location in a market sector into our model.

The rest of the paper is organized as follows: In the next section we develop the hypothesis. In the third section we explain the data collection procedure, proxy operationalization and the empirical model. The results and sensitivity tests are presented in the fourth section, and in the fifth section we conclude the study.

Religious adherence and audit pricing

Socially-endorsed patterns of behavior play a major role in affecting and guiding individual attitudes and behavior (Cialdini, 1993; Elster, 1989; Festre, 2010; Kohlberg, 1984; Sunstein, 1996). Embodying certain values and beliefs, endorsed patterns of behavior are "shared by a group [and] sustained both by sanctions and by

emotions of guilt and shame" (Festre, 2010, p. 514). These patterns of behavior enjoin a group's followers to forgo selfish benefits in the name of group benefits. Individuals may tend to comply with the understandings and expectations of their peer groups in order to avoid potential sanctions and, most importantly, to avoid being socially stigmatized and possibly isolated as a result of non-adherence to prevailing values and beliefs (Elster, 1989; Festre, 2010; Kohlberg, 1984; Sunstein, 1996). Moreover, accepted attitudes are usually rewarded with social approval and strong community support.

Patterns of endorsed behavior are, *inter alia*, shaped and disseminated through the operations of organized religious groups (Brammer et al., 2007). Religious communities offer role expectations and create conceptual frameworks according to which individuals develop certain understandings and construct their own self-identities (Weaver and Angle, 2002). Repeated social interaction, achieved mainly through attendance of ceremonies and other religious events, assists individuals in internalizing religious role expectations and the values promulgated by the specific community (Kennedy and Lawton, 1998; Lehrer, 2004; McGuire et al., 2012; Sunstain, 1996; Weaver and Angle 2002). Although religious identities may not have the same significance for each member, categories of religious role expectations may nevertheless have an impact on influencing individual behavior (Weaver and Angle, 2002).

Religious adherence has also been identified as an influential parameter of economic behavior (Brammer et al., 2007; Vitell 2009). Hunt and Vitell (1986), for instance, show that religion plays an essential role in determining not only judgments and intentions regarding a particular situation, but also the specific courses of action, i.e. the actual behavior. This is substantiated by a recent branch of the literature which

demonstrates that there is a positive association between religious adherence and individual economic attitudes characterized by risk aversion, an anti-manipulative ethos, self-control, honesty and conservatism[3] (Callen and Fang, 2015; Diaz, 2000; Mazar et al., 2008; McCullough and Willoughby, 2009; Miller and Hoffman, 1995).

Influences and pressures on economic attitudes also affect decision making at the firm-level (Dyreng et al., 2012; Grullon et al., 2010; Hilary and Hui, 2009; Kumar et al., 2011). Corporate attitudes are, to a certain degree, shaped by the prevailing values and endorsed behaviors in a geographical area. Recent literature shows that such influences take a more concrete form in locations where religious adherents constitute the predominant element of the local population (Boone et al., 2013; Callen and Fang, 2015; Chourou, 2013; Dyreng et al., 2012; Grullon et al., 2010; Hilary and Hui, 2009; Kumar et al., 2011). Extant literature provides insights into the main processes/conformity mechanisms through which corporate behavior is affected by the religious values in an area. Firstly, to the extent that religious individuals are concentrated in a county, firms located in this county are likely to employ a larger proportion of religious people at all levels of the organization. In this sense, "managerial style, corporate culture, employees' preferences, and investment behavior […] is generally aligned with the local environment of the firm" (Hilary and Hui, 2009, p. 459).

Secondly, having internalized religious values and adopted ethical intentions, religious adherents employed in firms are highly likely to feel religion-bound to blow the whistle on errant conduct (Barnett et al., 1996; Callen and Fang, 2015; Javers, 2011). This is probable since religious individuals have developed strong identities outside their work life and are not usually so caught up in their place on the corporate ladder. This makes it easier for them to unmask irregular corporate activities[4]. Javers

(2011) argues that a number of recent litigation cases against well-known corporations[5] have been instigated by religious middle and upper-middle managers knowledgeable of the firm's internal workings. In most cases, the irregularities/manipulations were publicly exposed and fines were imposed on the corporations involved. In a similar vein, Callen and Fang (2015) argue that, in more religious contexts, even if managers were tempted to withhold bad news regarding earnings for personal gain (when, for instance, their compensation is tied to earnings), they would avoid accounting malpractice for fear of such manipulations being publicly exposed by religious individuals.

Thirdly, while managers may not necessarily be active participants in any particular religion, the likelihood of interaction with religious individuals increases in locations where a large faction of the population is religious (Dyreng et al., 2012, p. 849). Through social interaction with local groups, managers familiarize themselves with the locally-accepted written or unwritten rules that guide and constrain behavior, which may mean they keep their own behavior in line with endorsed patterns (Dyreng et al., 2012; McGuire et al., 2012). It is highly likely that managers will conform to values adhered to by the social group in order to avoid disutility from deviation sanctions. Failure to conform to a locality's endorsed patterns of behavior generates strong levels of cognitive dissonance and emotional discomfort (Boone et al., 2013, p. 54; Callen and Fang, 2015, p. 11). Hence, it is maintained that, even if managers' religiosity was only "skin deep", they would still avoid deviating from religious values for fear of being stigmatized, since the cost of the social stigma often outweighs the potential pecuniary gains from non-endorsed activities (Callen and Fang, 2015).

The conformity mechanisms at work consequently entail that misleading and undesired accounting practices are less likely to be undertaken by managers in more religious geographical areas, since religiosity is viewed as an institutionalized monitoring mechanism which enhances accountability and transparency (Boone et al., 2013; Callen and Fang, 2015; Chourou, 2013; Dyreng et al., 2012; Grullon et al., 2010; Hilary and Hui, 2009; Kumar et al., 2011).

Recent studies demonstrate that the geographical location of corporate headquarters is a central place where not only important business decisions and policies are made, but also where managerial mentalities, attitudes and behaviors emerge and develop (Coval and Moskowitz, 2001; Davis and Henderson, 2008; Pirinsky and Wang, 2006; Porter, 1998; 2000; Rubbin, 2008). It is actually the main place where managers reside, meet and make decisions (Porter, 1998; 2000; Rubbin, 2008). Moreover, it serves as the epicenter of information distribution and exchange between the firm and various market participants (Coval and Moskowitz, 2001; Davis and Henderson, 2008; Pirinsky and Wang, 2006). In this sense, the location of corporate headquarters emerges as the geographical area where managers, who make business decisions and affect policies at the firm-level, interact with prevailing attitudes and behaviors (Kedia and Rajgopal, 2011; Kose et al., 2011; Loughran and Schultz, 2005; McGuire et al., 2012; Rubbin, 2008). Hence, the level of religious adherence in the area where a company is domiciled (headquartered) is related to business practices and accounting risk, incidences of financial reporting irregularities, and the frequency of accounting restatements (Conroy and Emerson, 2004; Dyreng et al., 2012; Grullon et al., 2010; Longenecker et al., 2004; McGuire et al., 2012). However, acknowledging that religiosity is associated with the quality of financial

reporting entails that religious adherence may also be related to auditing practice and, by extension, to audit pricing levels.

To make sense of the relationship between religiosity and audit pricing, we rely on the seminal work by Simunic (1980), who demonstrated that audit fees consist of a resource cost component and an expected loss component. Subsequent empirical studies have shown that various factors related to the client's broader context affect the resource and expected loss components in the audit pricing model (Gietzmann and Pettinicchio, 2013; Jaggi and Xin, 2014; Jha and Chen, 2015; Lyon and Maher, 2005).

For instance, Brumfield, Elliott, and Jacobson (1983) argue that client characteristics (such as management attitude with respect to operational and accounting matters, the existence of and potential for litigation, and the existence of and potential for regulatory intervention) influence auditors' perceptions of the client and, most significantly, their assessment of the level of audit risk. The authors argue that when an audit firm accepts a client with a perceived high business risk, the auditor may respond to this risk by increasing the amount of audit work (i.e., higher resource component) or increasing the billing rate (i.e., higher expected loss component), or both.

On the basis of social norm theory and the audit pricing model, we argue that, in more religious areas, managers responsible for corporate policy making are highly likely to develop risk-averse, anti-manipulative and conservative attitudes towards investment policies and business processes. This tendency is taken into consideration by auditors who are expected to adjust the cost resource and expected loss components of the audit pricing model in two different ways which are discussed in the following paragraphs.

In highly religious contexts, auditors would possibly assess a significantly lower engagement risk[6] due to the more ethical attitudes adopted by managers. Auditor assessments would result in a re-planning of the nature, timing and extent of audit procedures (Bell et al. 2001; Fukukawa et al., 2006; Graham and Bedard, 2003; Houston et al., 1999; Johnstone, 2000; Niemi, 2002). The lower engagement risk identified in highly religious contexts should lead the auditor to an estimation of a lower resource component, which translates into less audit effort.

Moreover, the auditor's assessment of the engagement risk is affected by the likelihood of litigation, which constitutes an essential element of the audit pricing model (e.g. Lyon and Maher, 2005). On this premise, we maintain that the institutional role of religiosity as a control mechanism that mitigates errant accounting practice may also lead auditors to perceive a lower risk of potential litigation in more religious areas. In such contexts, the auditor's analysis of the expected loss component is highly likely to lead to a reduced billing rate. In light of the aforementioned rationales, we argue that religiosity operates as a substitutive control mechanism to auditing and, through its impact on the resource and/or expected loss component, is negatively associated with audit fees.

Alternatively, however, executives and employees who operate in companies headquartered in more religious contexts may be more concerned about the quality of controls and financial reporting, since deviations from values associated with a reduced acceptance of unethical business practices and incidences of financial reporting irregularities may lead them to encounter social disutility and severe sanctions. Thus, being risk-averse and more conservative, managers may invest in more intense audits and require auditors to undertake extended processes to increase the degree of audit assurance. As a result, operating in a context where there is a high

demand for more thorough audits, the auditor would identify a higher engagement risk and estimate a higher resource component, i.e. more audit effort.

Auditors may also perceive that, in highly religious areas, the risk of litigation could be much higher as a result of managers' and third parties' reduced tolerance of errant behavior. Thus, the auditor meets the increased litigation risk with higher audit fees; in other words, the higher expected loss component necessitates an increase in the billing rate. In this sense, religiosity is expected to operate as a complementary rather than substitutive monitoring mechanism to auditing, given that higher religiosity is related to the more detailed and meticulous planning of the nature, timing and extent of audit procedures on behalf of auditors and/or higher litigation risk. Thus, religiosity may be associated with higher audit pricing.

Against the background of social norm theory and the audit pricing model, our formal, testable hypothesis reads as follows:

H: *Ceteris paribus*, the level of religious adherence in the location a firm is headquartered impacts on the level of audit fees.

Research design

Data

To test our predictions we focus on a single country, the US, for the following reasons: Firstly, by focusing on one country we obtain a homogenous sample in terms of the underlying financial and economic development, legal structure, public infrastructure and relevant institutional characteristics (Hilary and Hui, 2009). Secondly, in the US, religion has achieved a very influential role (Innaccone, 1998; Norris and Inglehart, 2004) and is expected to become even more prominent in the future (see Newport, 2012). Thirdly, the US is a favorable setting due to its religious

diversity (Norris and Inglehart, 2004). This enables religiosity to be operationalized based on multiple beliefs, practices and understandings – avoiding potential limitations due to single denominations (e.g. Catholics in Italy and Poland, Orthodox Christians in Russia and so on). Finally, rich datasets are available.

We start with all US publicly-listed firms for which continuous fee data are available on the Audit Analytics database for the period 2003-2010. We focus on the post Sarbanes-Oxley era, since cleaner datasets are available from that point onwards (Francis and Yu, 2009). This yields 4,039 firms available for the whole of our estimation window. Similar to prior literature (Causholli et al., 2010), we exclude 1,264 financial firms due to differential operations and regulations. We then eliminate a further 1,503 firms due to unavailable or missing data on Compustat. Our final sample consists of 1,272 firms for eight years, i.e. 10,176 firm-year observations. Following prior literature (Hilary and Hui, 2009; McGuire et al., 2012; Pirinsky and Wang, 2006), we define a firm's location as the location of its headquarters, since corporate headquarters are close to the core corporate business activities (Pirinsky and Wang, 2006) and it is the place where managers reside, meet and take decisions (Porter, 1998; 2000; Rubbin, 2008). Information about headquarter locations is obtained from Compustat and Audit Analytics[7]. Our sample firms reside in 335 US counties spread over 48 states (the exceptions being the District of Columbia, New Hampshire and Rhode Island).

Measuring religiosity

Similar to prior studies (Dyreng et al., 2012; Hilary and Hui, 2009), we operationalize our main religiosity measure by drawing upon Religious Congregations and Membership Studies (RCMS), published by Glenmary Research Center and

distributed by the American Religion Data Archive[8]. In 2000(2010), each of the 285(296) US-domiciled denominations listed in the Yearbook of American Churches[9] was asked to report the number of churches, members and adherents per county. Of the denominations asked in 2000(2010), 149(236) responded, resulting in 141.372(150.686) million adherents across all counties, which constitutes around 50.21%(48.78%) of the entire population in 2000(2010). While these rates might appear low, the survey captured most of the large congregations. The total reported adherents across all counties represented 89.3% and 92.39% (for 2000 and 2010 respectively) of the total adherents listed in the Yearbook of American and Canadian Churches (2010). Regarding potential bias in the measure, the characteristics of non-respondents are not provided by ARDA, however the high level of coverage minimizes the influence of response bias (as explained by Dyreng et al., 2012). Our main proxy of religiosity ($REL_{j,t}$) measures the degree of religiosity in the county where a firm is located (Hilary and Hui, 2009). Thus, similar to prior studies (Dyreng et al., 2012; Hilary and Hui, 2009), $REL_{j,t}$ is a measure of religious group adherence and equals: the number of adherents reported by all denominations in the RCMS in the county (*j*) where the firm is headquartered in year (*t*), divided by the population of the county (*j*). Dyreng et al., (2012) suggest that the larger the faction of the population who are religious adherents, the greater the influence of religious values on corporations headquartered in the county, i.e. the higher the REL value the stronger the religious impact. In order to construct the religious adherence values for our sample years between 2000 and 2010, we follow prior research (Alesina and La Ferrara, 2000; Dyreng et al., 2012; Hilary and Hui, 2009) and we linearly interpolate using the RCMS religious adherence values from 2000 and 2010 to obtain the missing values in the intervening years (2003-2010). We linearly interpolate the population data based

on the 2000 and 2010 US Census Bureau data. Approximating REL through interpolation linearly increases the power of our tests, which gives us the opportunity to study the time-series (see Hilary and Hui, 2009) rather than single year (2010) properties of our setting. However, as an additional check, we clarify that our results hold when we do not interpolate REL.

Considering that there are many ways to measure religiosity (Hood et al., 1996), we rely on The Pew Forum[10] to additionally test the hypothesis based on alternative religiosity proxies. Accordingly, we employ the Religious Landscape Survey (RLS) (for methodology see RLS[11], 2007) which was conducted in the summer of 2007, employing a representative sample of 35,957 adults at state level. This survey provides data on the following four measures: a) the importance of religion in people's lives (IMP), b) the frequency of attendance at worship services (WOR), c) the frequency of prayer (FRP) and d) the absolute certainty of belief in God (BEL). Thus, we additionally test the hypothesis using the abovementioned measures of religiosity at state level for the year 2007 only, when the survey was conducted, by employing each of the religiosity measures separately in every regression.

Control variables

We identify control variables by drawing upon prior literature. Following Causholli et al. (2010), we classify control variables as being related to client attributes, auditor attributes and engagement attributes. We additionally control for geography and demographics. Given that there are analytical explanations of control variables available in the relevant literature (Bierstaker et al., 2006; Causholli et al., 2010;

Dyreng et al., 2012; Hay et al., 2006; McGuire et al., 2012), we only provide a brief account of their importance here in relation to audit fee levels and operationalization.

Firstly, we control for client variables which are demonstrated to have the most substantial impact on fees, with size being the most significant (Hay et al., 2006). SIZE is measured by the natural logarithm of total assets (Francis, 1984). Current ratio (CUR) proxies liquidity, as it is also considered to be influential (Hay et al., 2006), and it is measured as current assets to current liabilities. Return on assets (ROA) and LOSS are found to be significant so they are also included (Causholli et al., 2010). Leverage (LEV) is employed since prior literature highlights that it requires consideration (Hay et al., 2006) and it is measured as total debt to total assets (ibid.). Organizational complexity is controlled by the number of business segments (SEG) (Gul and Goodwin, 2010). BETA is also suggested as influential in the literature (Cobbin, 2002). Additionally, following relevant studies, we control for company age (AGE) and product market competition (PMC) (Hay et al., 2006; Leventis et al., 2011). AGE is measured by the natural logarithm of the number of years of operation. PMC is measured using the Herfindahl-Hirschman index (H-index), which is defined as the sum of the square fractions of the sales of the 50 largest firms in any given industry. Industries are defined on the basis of their two-digit SIC codes. In cases where there are fewer than 50 firms in an industry, we use all firms in the industry to calculate market shares, similar to Dhaliwal et al. (2011). Additionally, we control for listing status (NYSE), since prior literature suggests it is influential to audit risk (Causholli et al., 2010). Thus, we incorporate a dummy variable to signify NYSE listing, controlling mainly for NASDAQ listed firms. Finally, we include litigation risk (LIT), since it is found to be of significance in prior studies (Venkataraman et al., 2008). We measure LIT by a dummy variable to

indicate the existence/non-existence of a major,[12] federal legal proceeding under SEC regulation S-K §229.103.

We also control for variables associated with auditor attributes. We include auditor industry specialization (SPEC) in our analysis (Francis et al., 2005; Hay et al., 2006). While we operationalize this proxy as the audit firm with the highest audit fee revenue[13] in a particular two-digit SIC code category within a state, we further test for alternative operationalizations and cut-off points (see industry specialization and sensitivity sections). Additionally, we control for engagement attributes, including the presence of a going concern qualification in the audit report (GCON) (Hay et al., 2006). GCON is measured by the dummy variable of going concern/non-going concern qualification (Causholli et al., 2010). We also include audit engagement in the busy season (FIS), conventionally measured by a December year-end (Antle et al., 2006). Auditor change (AUDC) is also found to be influential in the literature (Huang et al., 2009), therefore we include it in the model and employ AUDC as a dummy variable to signify auditor change/no auditor change, when compared to the prior year (similar to Antle et al., 2006; Numan and Willekens, 2012). Additionally, we control for time and industry.

Prior literature suggests that religiosity is bound to geography and to demographics (McGuire et al., 2012; Omer et al., 2015). Thus, we control for demographics that prior research indicates are determinants of religiosity (Hilary and Hui, 2009; Innaccone, 1998; McGuire et al., 2012). As such, we include state population (POP) measured by the natural logarithm to control for skewness in this variable. We also include the percentage of males (MALE) and the percentage of minorities (MINO) in the state. We obtain the abovementioned demographics from the US Census Bureau, specifically from the American Community Survey[14] which

provides yearly data. In order to control for state economic activity, considering that auditing is primarily a labor-intensive activity (Lemon et al., 2000), we include the natural logarithm of average wage per state (WAG). We obtain this data from the US Bureau of Labor Statistics[15]. We do, however, perform sensitivity tests employing additional demographics (see sensitivity testing, section 5).

Finally, we control for a firm's location in a rural area (RUR) as prior research suggests that firms located in rural areas experience an audit fee discount (Clatworthy and Peel, 2007). To consider this effect, we follow Ivkovic and Weisbenner (2005) and Loughran and Schultz (2005), among others, and aggregate headquarter locations by metropolitan statistical areas (MSAs). Thus, we classify firms into three subsamples based on the size of the city where the firm is headquartered and its distance from major population and economic activity clusters. More specifically, after obtaining company headquarter locations, we indicate two groups of urban firms: a) firms headquartered in one of the largest MSAs of the US (i.e., New York City, Los Angeles, Chicago, Washington, Baltimore, San Francisco, Philadelphia, Boston, Detroit, Dallas and Houston); and b) firms headquartered in an MSA with at least 1 million residents, as defined by the US Census. We classify as rural (RUR) those firms located at least 250 kilometers away from the above (a and b) groups of firms and based in MSAs with less than 1 million residents. This is because prior literature on urban economics provides ample evidence suggesting that distance to urban centers significantly differentiates corporations (Duranton and Puga, 2004) and that the 250km criterion is a valid measure of this differentiation in the US (Francis et al., 2012). To estimate distance, we find the latitude and longitude data for each firm's headquarters using the US Census Bureau's Gazetteer city-state files (www.census.gov/geo). We then compute the distance between each firm's

headquarters and the ten largest US metropolitan areas, including their suburbs, and between each firm and the US metropolitan areas with populations of at least 1 million. We employ the following formula for computing the distance *d(a,b)* in statutory kilometers between the two points *a* and *b* as follows:

$$d(a,b) = \arccos[\cos(a_1)\cos(a_2)\cos(b_1)\cos(b_2) + \cos(a_1)\sin(a_2)\cos(b_1)\sin(b_2) + \sin(a_1)\sin(b_1)]r \text{.....(1)}$$

Where: a_1 and b_1 are the latitudes and longitudes of the two points (expressed in radians) respectively, and r denotes the radius of the earth (approximately 6,378 statutory kilometers).

Empirical model

We employ OLS regression models to examine the association between religious adherence and audit pricing. Audit fees are measured by the natural logarithm, similar to prior studies (e.g. Hay et al., 2006). Considering that audit fees are sticky over time, coefficients might be inflated due to repeated observations. Prior literature has indicated the importance of estimating t-statistics on the basis of standard errors that are adjusted for hetereoskedasticity and possible correlation within a cluster (Gow et al., 2010; Petersen, 2009). By following Boone et al. (2015) and Numan and Willekens (2012) and employing Rogers' (1993) procedure, we cluster standard errors by audit firms for this and all subsequent models. The functional form of the model is specified as follows:

$$AF_{ij} = \alpha_o + \alpha_1 Religiosity_j + \alpha_2 LIT_j + \alpha_3 SIZE_j + \alpha_4 SEG_j + \alpha_5 CUR_j + \alpha_6 ROA_j +$$
$$\alpha_7 LEV_j + \alpha_8 BETA_j + \alpha_9 LOSS_j + \alpha_{10} AGE_j + \alpha_{11} NYSE_j + \alpha_{12} PMC_j +$$

$$\alpha_{13}AUDC_j + \alpha_{14}FIS_j + \alpha_{15}SPEC_j + \alpha_{16}GCON_J + \alpha_{17}RUR_J + \alpha_{18}POP_J +$$

$$\alpha_{19}MALE_J + \alpha_{20}MINO_J + \alpha_{21}AGE_J + \sum \alpha_j YEARS_j +$$

$$\sum \alpha_j INDUSTRIES_j + u_j \quad (2)$$

Definitions of all variables in equation 2 are provided in Table 1.

[Insert Table 1 about here]

Table 2 presents the descriptives of county religiosity. Panel A shows values from the 2000 and 2010 RCMS, which are the values we use to interpolate our sample data points. The mean(median) value of religious adherence per capita in our sample counties is 51%(50.4%) and 49.5%(48.5%) in 2000 and 2010 respectively – which is very similar to the national rates. The 2000 and 2010 data for county-level adherence is highly persistent, with a correlation of 0.75. In Panel B of Table 1, we compare the ten most religious and ten least religious states based on the counties in our sample. For the purpose of comparison with prior literature: of their top ten most religious states, Dyreng et al. (2012) list 6 in common with our study, McGuire et al. (2012) list 5 and Hilary and Hui (2009) also list 5. Six of our least religious states are also ranked in the bottom 10 by Dyreng et al. (2012), 6 by McGuire et al. (2012) and 9 by Hilary and Hui (2009). Considering that we have different sample compositions to these studies, and that our religiosity proxy is based on the more up-to-date RCMS 2010 dataset, we trust that our classification of states is reasonable. Figure 1 depicts the religiosity measures of US states based on our sample, ranging from the most "pious"

state of Utah down to the state of Nevada, where most companies are headquartered in the "sin" city of Las Vegas (Clark County).

[Insert Table 2 about here]

[Insert Figure 1 about here]

To reduce the effect of any outliers, we winsorize all continuous model variables at the 1st and 99th percentiles of their respective distributions. Table 3 presents the summary statistics of the variables used. The mean(median) of the main dependent variable is 13.85(13.92), similar to prior studies (see Gul and Goodwin, 2010; Numan and Willekens, 2012). The mean(median) of REL is .520(.527) and is very close to values reported by Dyreng et al., (2012). The mean(median) of the other main independent variables are .551 (.540) for IMP, .385(.370) for WOR, .567(.560) for FRP and finally .703(.710) for BEL; suggesting that most interviewees declare absolute belief in God but less of them declare worship attendance (WOR). The means of CUR, ROA and LEV are 2.06%, 2.55% and 27.33% respectively, indicating that our sample firms are not particularly liquid, profitable or leveraged and these findings are similar to prior studies (see Gul and Goodwin, 2010). Additionally, around 6% of firms changed auditors from prior years (identical to Numan and Willekens, 2012), while around 67% report a year end on 31 December, which is higher than the value reported by Fung et al. (2012). Finally, around 20% of our sample firms have been involved in a major litigation, which is close to the value reported by Antle et al. (2006) for their industry-based litigation measure.

Table 4 and Table 5 present the two-tailed p-values of the Pearson correlation tests between the regression variables. AF is significantly correlated with REL with a

negative sign. Almost all variables are correlated significantly with AF, with SIZE exhibiting the highest p-value. Other inferences suggest that multicollinearity is not a serious problem (Gujarati, 1995). Hilary and Hui (2009) find that firms headquartered in religious counties invest less in risky projects, which results in higher profitability. Our data support these relationships since we find that firms located in areas characterized by higher religiosity have a higher ROA, fewer incidences of past losses (LOSS) and a lower BETA. Given that these variables are significantly correlated with AF, and in order to draw more conclusive inferences considering the effect of religiosity on audit pricing (since univariate comparisons do not control for confounding factors), we employ a multivariate analysis so as to hold these correlated factors constant.

[Insert Table 3 about here]

[Insert Table 4 about here]

Empirical results

Religious adherence and audit fees

The regression results are summarized in Table 5. All regression models are significant at 1%, with explanatory powers of around 83%. The coefficients of all religiosity measures (REL, IMP, WOR, FRP and BEL) are negative and all significant at 1%. This suggests that, no matter how religiosity is measured (i.e., percentage of religious adherents in local counties for REL; interviewee perceptions for IMP, WOR, FRP and BEL), audit firms charge significantly less to firms located in more religious areas. If we focus on the main model (REL) and we interpret the coefficients as elasticities, we find that an increase of REL by 1% will provide a decrease in audit

fees by around 22%, ($e^{-.251} - 1 = -.22$), i.e. an average decrease of $560,000[16] per year per firm. While this amount is economically material in absolute terms, it is also considerable regarding the projections of enhanced religiosity levels in the US in the foreseeable future (see Newport, 2012).

[Insert Table 5 about here]

The regression coefficients of the control variables are consistent with the expected signs based on prior research, except for ROA and FIS. Specifically, for the REL model the significance for client variables suggests that SIZE, complexity (SEG), liquidity (CUR) and risk (BETA, LEV, NYSE, LOSS) have a significant association with audit pricing (similar to Causholli et al., 2010; Hay et al., 2006). LEV has a significant negative sign, tentatively suggesting that lenders carry out a monitoring role, verifying the expectations raised by Jensen and Meckling (1976). LIT has a significant and positive sign, similar to prior studies (e.g. Antle et al., 2006) which suggest that litigation is an important element of the inherent risk that auditors consider when organizing and executing the audit (see Hay et al., 2006). PMC has a significant positive coefficient, suggesting that at higher levels of product market competition the monitoring costs of audit scrutiny are reduced, probably because owners can place some reliance on the product market scrutiny of management by competitors (Leventis et al., 2011). SPEC is significant with a positive sign, suggesting that when audit firms manage to dominate in a market sector they demand and receive fee premiums, which is similar to prior literature on audit specialization (Ferguson et al., 2003; Francis et al., 2005). Additionally, difficulties related to audit engagements, as suggested by the significance of GCON and AUDC, are significant

for the determination of audit fees (similar to Hay et al., 2006). The negative coefficient of AUDC requires some further investigation to verify whether low-balling takes place, i.e. whether auditors provide fee discounts in initial engagements to attract new clients, followed by fee recovery in the future while still retaining the client (DeAngelo, 1981). AGE is not significant, similar to Caramanis and Lennox (2008). The coefficients of demographic controls are in line with expectations and all make economic sense. Interestingly, the coefficient of RUR is significant at 1% and WAG is also significant. This suggests that audit fee premiums previously attributed exclusively to cost-related factors in urban areas (Clatworthy and Peel, 2007) might require further investigation. The significance of control variables for the IMP, WOR, FRP and BEL models are overall very similar and also do not materially deviate from the above-discussed findings regarding the REL model. Specifically, all control variables share similarities in signs and significance except CUR, LEV, CGON and WAG, which are significant only for the REL model; while AGE and MINO are significant only for the IMP, WOR, FRP and BEL models.

Overall, our results support prior literature and demonstrate that audit pricing is affected by client, auditor and audit-engagement characteristics. They also indicate, however, that previously-developed audit fee models (e.g. Bierstaker et al., 2006) should pay additional attention to external factors and, in particular, the intensity of religious adherence.

Extensions

While we provide empirical evidence that religious adherence is associated with a significant audit fee discount, we further extend our investigation on two fronts. First, we examine whether the impact of religion still holds when measures of spatial

competition are introduced, since recent evidence suggests that audit fees are affected by an auditor's relative location within a market segment (Numan and Willekens, 2012). Second, we investigate whether the impact of religion is different across levels of auditor industry expertise, since prior literature suggests that audit firms with industry expertise differ in terms of audit pricing and audit quality (Huang et al., 2007; Reichelt and Wang, 2010).

Audit spatial competition

Considering a differentiated product market perspective (e.g. Hotelling, 1929; Tirole, 1988), Numan and Willekens (2012) provide evidence suggesting that audit fees increase when there is considerable alignment between auditor and client, and when the distance between the auditor and the closest competitor is greater. Thus, we examine to what extent our religiosity results hold when an auditor's relative industry and geographical location in a market segment is introduced. Following Numan and Willekens (2012), we operationalize auditor-client alignment as the industry portfolio share (IPS) within an audit market (i.e. a 2-digit SIC industry within a US MSA). Additionally, we operationalize auditor-competitor distance (DIS) as the smallest absolute fee market share between the auditor and their closest competitor within an audit market. Similarly to Numan and Willekens (ibid.), we include in our model the effect of concentration within an audit market, measured by the Herfindahl concentration index (HER) per audit market, which is calculated as $X = \sum_{i=1}^{n} s_i^2$ where: *i* is an audit office in an audit market and *s* is the market share in an audit market based on audit fees. We also control for industry specialization effects at the national level, similar to Numan and Willekens (ibid.), as prior evidence suggests that national-specific industry expertise is priced (DeFond et al., 2000;

Huang et al., 2007). Thus, we include ISPN which is the fees an audit firm generates in a 2-digit SIC industry as a percentage of the total fees generated by the average audit firm nationwide.

An issue which initially provided us with some concern is the high correlation between HER and DIS (see Table 3), although this correlation between HER and DIS is not as high as in the model by Numan and Willekens (2012). Nevertheless, considering that the VIF of the model is not extremely high (6.2), and for reasons of comparability with Numan and Willekens (ibid.), we keep it in the model. The regression results are reported in Table 6. Initially, we find that IPS and DIS are significant at 1% with the expected positive sign. This supports Numan and Willekens' results (ibid.), suggesting that their findings hold for a wider time frame (2003-2010). The negative sign of the DIS x IPS interaction is also similar to Numan and Willekens (ibid.). However, the significant coefficient suggests that DIS and IPS are dependent on each other to some extent. When REL and control demographics are included in the model, REL is significant at 1% with the expected negative sign, suggesting that religiosity remains significant in a spatial competition framework.

[Insert Table 6 about here]

Auditor industry expertise

Prior literature has indicated that industry expertise premiums contribute to the structure of audit fees (Huang et al., 2007; Reichelt and Wang, 2010) and thus the relevant effects need to be investigated (Fung et al., 2012). Prior evidence, however, has indicated that proxy determination of auditor expertise is crucial. This is because prior studies measuring auditor expertise at a national level have provided mixed

results. For example, while Palmrose (1986) and Francis et al. (2005) report no expertise premium, contrary to the findings of Castarella et al. (2004) and Huang et al. (2007), some others provide only limited support (e.g. Ferguson and Stokes, 2002). Interestingly, some relatively more recent studies have shifted the attention to a more geographically-restricted auditor industry expertise proxy, based on the rationale that the primary audit work and decision making involving clients occurs at local offices (Francis et al., 2005). Indeed, these studies report strong evidence for auditor expertise premiums (Carson and Fargher, 2007; Ferguson et al., 2003; Francis et al., 2005; Fung et al., 2012).

Against this background, we initially examine whether the impact of religion is different across different levels of auditor industry expertise, i.e. we test whether the bargaining power of auditor expertise, as clearly documented in prior literature (Casterella et al., 2004; Mayhew and Wilkins, 2003), moderates the effects of religiosity. Thus, we split the sample into firms that have auditors with industry market expertise versus those with no industry expertise. We consider industry expertise as the audit firm with the largest audit fee market share in a 2-digit SIC industry in a particular state. Additionally, we test whether differential definitions of industry expertise influence the strength of our results. Thus, we define auditor expertise[17] at national, MSA and county levels and run the model again. We conduct a further sensitivity test to see whether cut-off points for the determination of industry expertise play a role (see section 5). The results are reported in Table 7.

[Insert Table 7 about here]

Considering that the coefficients of REL remain significant at the 1% level in both (expert vs. non-expert) groups, we conclude that our initial results do not differ based on levels of industry expertise. Additionally, the REL coefficient remains significant at 1%, which suggests that our results hold irrespectively of auditor-expertise proxy determination. Interestingly, the coefficient of expertise (SPEC) becomes stronger as we move from national to county level, suggesting that local segmentation might be a driving force behind audit fee determination.

Sensitivity analysis on main results

In developing our hypothesis on the relation between religiosity and audit pricing, we base our rationale on previous researchers who demonstrate that religiosity is associated with lower levels of financial misstatement. However, to test whether this holds in our sample, we rely on the McGuire et al. (2012) model and examine whether religiosity is negatively associated with measures of earnings management, accounting risk and the likelihood of restatement. Specifically, we employ the Dechow et al. (1995) and Kothari et al. (2005) models to measure earnings management while we rely on Audit Integrity's accounting risk (AR) measure developed by GMI (www.gmiratings.com), which has been used by various prior studies (e.g. McGuire et al., 2012) to measure accounting risk. Our results suggest that religiosity does indeed have a significantly negative coefficient in relation to all these measures, i.e. the level of religious adherence is negatively associated with levels of financial misstatement in our sample as well.

We further consider the robustness of our results in a number of different ways. Firstly, following Grullon et al. (2010) and Dyreng et al. (2012), we run an alternative proxy of religiosity (developed by RCMS) measured as: the number of

churches reported by all congregations in the county (*j*) where the firm is headquartered in year (*t*), divided by the population of the county (*j*), times 1,000. Our inferences remain the same. Secondly, we test whether our results hold for a single year of our sample, to ensure that our results do not depend on the interpolation of our religiosity data across multiple years (McGuire et al., 2012). We limit the sample to 2010 (for the most recent RMCS data) and run our primary tests again, similar to Dyreng et al. (2012). We find similar results.

Thirdly, since audit fees are determined, to some extent, by negotiations with auditors, it is likely that our results are partially driven by auditor religiosity. To examine whether our results are driven by auditor religiosity, we employ a subsample of auditors and clients that are not located in the same MSAs. In our sample, 27.30% of auditors are located in different MSAs than their clients, while auditor and client religiosity are highly correlated (.652) at the 1% level of significance. Thus, we run the REL regression again considering auditor religiosity. Results are consistent with those in Table 5. Specifically, the coefficient on the REL is negative and significant at 1%.

Fourthly, we test for sensitivity with a battery of variables that have been found or suggested (explicitly or implicitly) to influence audit pricing but are not included in our full model due to data and/or specification reasons. Thus, we test non-audit fees (NAF) and the ratio of non-audit fees to total fees (FEE) (Causholli et al., 2010). NAF is significant with a positive sign while FEE is significant with a negative sign. We also test international sales to turnover (FOR) and the number of subsidiaries (NS) (Hay et al., 2006). These are both significant with a positive sign. Additionally, we test the effect of: book to market (Cobbin, 2002); membership of the Fortune 500 index (Kedia and Rajgopal, 2011); and research and development to turnover

(RandD) (Gul and Goodwin, 2010); all of which are non-significant. The incorporation of all the above variables does not change our inferences.

Additionally, we test for the auditor's assessment of internal controls efficiency (Gul and Goodwin, 2010). We use a dummy, obtained from Audit Analytics, to indicate efficient/inefficient internal controls. We find that the inefficiency of internal controls significantly increases audit fees (at the 1% significance level), probably due to the increased audit risk and/or because auditors undertake some extra relevant tasks, while the REL coefficient remains significant at 1%. We also test for additional demographic and geographic controls. Accordingly, we include: educational attainment (EDU), defined as the percentage of people in the state who are 25 years or over and have a bachelor's degree; the percentage of married people in the state (MAR); and the average state income (INC) (Hilary and Hui, 2009; Innaccone, 1998). Again, our inferences remain unchanged.

Moreover, we control for state judicial quality, since the quality and integrity of the judicial system may influence managerial and auditor decisions (Kedia and Rajgopal, 2011). We operationalize state judicial quality (SJQ) using the overall state ranking reported in the 2001 State Liabilities Rankings Study which was conducted for the US Chamber of Commerce[18] (2002). SJQ is not found to be significant, while the significance of the REL coefficient remains unchanged.

We also control for corporations headquartered in states that have implemented the education requirement of the 150-hour rule[19] (R150), since it has been suggested to influence audit price determination (Allen and Woodland, 2010). Indeed, R150 is significant at the 1% level, while REL remains significant at 1%. Additionally, we re-estimate our results in Table 5 using county-level measures for population, average wage and audit specialization. Our inferences remain unchanged.

Fifthly, endogeneity is always a potential concern when data are cross-sectional. In this project, however, endogeneity may be limited to correlated omitted variables rather than reverse causality. It is highly unlikely that levels of audit fees cause companies to change headquarters, since firms relocate only rarely (see Pirinsky and Wang, 2006), or that they lead people to change religious adherence. So, we consider the REL variable as exogenous to audit pricing. Nevertheless, we account for variables that could conceptually be correlated to both REL and audit pricing.

For this reason, we examine the effect of the prevailing political values in the geographical areas (Rubbin, 2008), which have been suggested to determine economic (Kaustia and Torstila, 2011), accounting (Dyreng et al., 2012) and audit outcomes (Leventis et al., 2013). We operationalize $POL_{j,t}$ through a dummy, coded 1 where election results favor Republican candidates, and 0 where the election results favor Democratic candidates in the county (*j*) where firms are headquartered in year (*t*). When POL is included in the model, the REL coefficient remains at the same level of significance.

We also examine the impact of financial misstatement on audit pricing. While there are regulatory and market concerns regarding the relationship between audit pricing and measures of financial misstatement, empirical literature is still inconclusive with regard to the direction of the relationship (see Larcker and Richardson, 2004). Thus, for sensitivity reasons, we test whether the inclusion of proxies of financial misstatement have any disproportionate effects on our results by including academically- and commercially-developed measures. Specifically, we employ academically-developed proxies (Dechow et al., 1995; Kothari et al., 2005) and Audit Integrity's accounting risk (AR) measure. However, our results remain unchanged.

In addition, we look at the effect of ownership structure since prior studies demonstrate that this can affect audit pricing (e.g. Khalil et al., 2008). Kumar et al. (2011) suggest that companies headquartered in more religious areas might share particular characteristics in terms of ownership structure. We therefore include two additional variables to measure institutional and insider ownership. We measure institutional ownership as the percentage of total shares outstanding held by organizations, companies, universities and other groups that have greater than $100 million in equity assets. We measure insider ownership as the percentage of the total number of common stock outstanding held by corporate insiders. Officers, directors, and beneficial owners are only included if they hold at least 1,000 shares. We also examine the interaction between religiosity and ownership structure variables. In all the abovementioned tests, the coefficient of religiosity remains significant at 1%, while the interactions are not significant.

Sixthly, while we define auditor expertise, similar to prior studies (Ferguson et al., 2003; Francis et al., 2005), as the audit firm with the largest audit fee market share in a 2-digit SIC industry, we also sensitivity test for alternative definitions. Thus, we run the models again by including specialization when an audit firm has a fee market share of at least 25% (or 30% in a 2-digit SIC industry), similar to prior studies (e.g. Numan and Willekens, 2012). Our results remain unchanged. We also test whether religiosity plays any role in the determination of the FEE variable (non-audit fees to total fees). Indeed, in this case, REL has a significant negative coefficient.

Finally, we estimate a median regression (minimizing the sum of absolute errors instead of squared errors) to ensure that our results are not driven by outliers. However, the REL coefficient remains significant at 1%.

Conclusions

In this paper, we examine whether religiosity affects audit pricing levels. In particular, we test whether audit firms follow different audit fee policies in the case of firms headquartered in US counties characterized by high religious adherence. We draw upon recent literature that documents how religiosity operates as a monitoring institution which reduces managerial slackness and corporate irregularities, and enhances accountability and transparency in financial reporting (Dyreng et al., 2012; McGuire et al., 2012). Bearing this in mind, we examine whether firms headquartered in more religious areas experience significant audit pricing adjustments by employing a sample of 1,272 US-listed firms for an eight-year period (2003-2010). On the basis of social norm theory and Simunic's (1980) seminal work, which drew attention to the resource component and the expected loss component of the audit fees model, we demonstrate that religiosity, at firm-level, mitigates audit costs (related resource and/or expected loss components) which results in reduced audit fees. Furthermore, we find that the impact of religiosity on auditor pricing decisions is not differentiated by levels of auditor expertise. We also provide evidence that audit fees are determined by the auditor's relative location in the market sector (similar to Numan and Willekens, 2012) and the auditor's level of religious adherence.

Our study provides several contributions. Firstly, our findings extend the literature and further understandings of the determinants of audit pricing by testing the impact of religiosity on audit fees. While prior literature on audit fees has focused on company- and/or audit-specific variables (see for instance Beattie et al., 2001, Bierstaker et al., 2006; Hay et al., 2006), we show that audit pricing is significantly driven by an external factor related to religious adherence that lies beyond managerial or auditor control. Secondly, we demonstrate that, since in religious contexts

managers develop risk-averse and conservative attitudes which lead to less corporate investment risk, auditors assess such client contexts as less risky and plan audit processes accordingly – which reduces the fees charged. Therefore, we show that religiosity operates as a substitutive control mechanism to auditing, extending the newly-established branch of literature on the importance of religiosity in relation to financial reporting processes (Callen and Fang, 2015; Hilary and Hui, 2009; McGuire et al., 2012). Thirdly, we provide evidence that the impact of religiosity on auditor pricing decisions is not differentiated in relation to levels of auditor expertise. Moreover, we show that audit fees are simultaneously determined by the auditor's relative location in a market segment and by the level of religiosity in the corporate location.

The implications of our results are important for regulators, shareholders, managers and auditors since we demonstrate that the different levels of religious adherence across various counties are related to differential audit pricing policies. Thus, a constitutive element of corporate agency costs, namely audit fees, is shown to oscillate in association with the intensity of the religious adherence which characterizes the geographical area within which firms are headquartered. The substitutive role of religiosity might also be a factor to take into consideration when relevant attempts to regulate or increase levels of accounting quality are made (see Guiso et al., 2006). Moreover, market participants (in particular investors, shareholders and analysts) should be aware that, *ceteris paribus*, in highly religious counties agency costs are significantly reduced, which may add a new perspective to investment strategies and financial reporting analyses.

We note, however, some limitations to our research. We acknowledge that the particular research design adopted has certain limitations. By focusing on the location

of corporate headquarters and the level of religiosity geographically, we do not actually measure the individual religiosity of managers or auditors. Therefore, we are not in a position to rule out the possibility that our results may be partially driven by individual beliefs. In this light, further investigation is required by employing alternative tools such as (electronic or mail) surveys and interviews to measure aspects of individual religiosity, i.e. belief, practice, formal membership, informal affiliation, ritual initiation, doctrinal knowledge, moral sense and core values. Such approaches might provide additional insights into the religiosity-audit pricing relationship. Moreover, since our study is restricted to the US, our findings are limited to the specific geographical borders and thereby may not be generalizable. Future researchers could employ cross-country samples to run the tests and models introduced in this study in order to produce more generalizable results.

References

Alesina, A. and La Ferrara E. (2000). Participation in heterogeneous communities. *Quarterly Journal of Economics* 115(3), 847–904.

Allen, A. and Woodland, A. (2010). Education requirements, audit fees, and audit quality. *Auditing: A Journal of Practice and Theory* 29(2), 1-25.

Angelidis J. and Ibrahim, N. (2004). An exploratory study of the impact of degree of religiousness upon an individual's corporate social responsiveness orientation. *Journal of Business Ethics* 51(2), 119-128.

Antle, R., Gordon, E., Narayanamoorthy, G. and Zhou, L. (2006). The joint determination of audit fees, non audit fees and abnormal accruals. *Review of Quantitative Finance and Accounting* 27(3), 235-266.

Barnett, T., Bass K. and Brown G. (1996). Religiosity, ethical ideology, and intentions to report a peer's wrongdoing. *Journal of Business Ethics* 15(11), 1161-1174.

Barro, R. and McCleary, R.M. (2003). Religion and economic growth across countries. *American Sociological Review* 68(5), 760-781.

Basioudis, I., Gul, F.A. and Ng, A.C. (2013). *Non-Audit Fees, Religiosity and Auditor Independence*. Working Paper, Aston University.

Beattie, V., Goodacre, A., Pratt, K. and Stevenson, J. (2001). The determinants of audit fees - evidence from the voluntary sector. *Accounting and Business Research* 31(4), 243-274.

Bedard, J., Deis, D., Curtis, M. and Jenkins, G. (2008). Risk monitoring and control in audit firms: A research synthesis. *Auditing: A Journal of Practice and Theory* 27(1) 187–218.

Bell, T., Landsman, W. and Shackelford, D. (2001). Auditors' perceived business risk and audit fees: Analysis and evidence. *Journal of Accounting Research* 39(1), 35–43.

Bierstaker, J., Houston, R. and Wright, A. (2006). The impact of competition and audit planning, review and performance. *Journal of Accounting Literature* 25(1), 1-58.

Bloodgood, M., J., Turnley, H., W. and Mudrack, P. (2008). The influence of ethics instruction, religiosity and intelligence on cheating behavior. *Journal of Business Ethics* 82(2), 557-571.

Boone, J. P., Khurana, I. K. and Raman, K. K. (2013). Religiosity and tax avoidance. *Journal of the American Taxation Association* 35(1), 53-84.

Brammer, S., Williams, G. and Zinkin, J. (2007). Religion and attitudes to corporate social responsibility in a large cross-county sample. *Journal of Business Ethics* 71(3), 229-243.

Brumfield, C., Elliott., R. and Jacobson. P. (1983). Business risk and the audit process. *Journal of Accountancy* 155, 60-68.

Callen, J. and Fang, X. (2015). Religion and stock price crash risk. *Journal of Financial and Quantitative Analysis* forthcoming.

Caramanis, C., and Lennox C. (2008). Audit effort and earnings management. *Journal of Accounting and Economics* 45(1), 116-138.

Carson, E., and Fargher, N. (2007). Note on audit fee premiums to client size and industry specialization. *Accounting and Finance* 47(3), 423–446.

Casterella, J. R., Francis, J. R., Lewis, B. L. and Walker, P. L. (2004). Auditor industry specialization, client bargaining power, and audit pricing. *Auditing: A Journal of Practice & Theory* 23(1), 123–140.

Causholli, M., De Martinis, M., Hay, D. and Knechel, W. R. (2010). Audit markets, fees and production: Towards an integrated view of empirical audit research. *Journal of Accounting Literature* 29, 167-215.

Chourou, L. (2013). *Does religiosity matter to value relevance? Evidence from U.S. banking firms*. Working Paper, University of Ottawa, Telfer School of Management available at http://qspace.library.queensu.ca/bitstream/1974/8486/1/Chourou_Lamia_20131 1_PhD.pdf (accessed 15 December 2015).

Cialdini, R. (1993). *Influence: The psychology of persuasion*. New York: Quill.

Clatworthy, M.A. and Peel, M.J. (2007). The effect of corporate status on external audit fees: evidence from the UK. *Journal of Business Finance and Accounting*, 34 (1and 2), 169-201.

Cobbin, P. E. (2002). International dimensions of the audit fee determinants literature. *International Journal of Auditing* 6(1), 53-77.

Conroy S.J. and Emerson T.L.N. (2004). Business ethics and religion: religiosity as a predictor of ethical awareness among students. *Journal of Business Ethics* 50(4), 383-396.

Coval, J., Moskowitz, T. (2001). The geography of investment: Informed trading and asset prices. *Journal of Political Economy* 109(4), 811-841.

Danziger, E. (1999). Just say no to costly clients. *Journal of Accountancy* 187(6). 45-50.

Davis, J. C. and Henderson, J. V. (2008). The agglomeration of headquarters. *Regional Science and Urban Economics* 38(5), 445-460.

DeAngelo, L. (1981). Auditor independence, low balling and disclosure regulation. *Journal of Accounting and Economics* 3(2), 113-127.

Dechow, P.M., Sloan, R.G. and Sweeney, A.P. (1995). Detecting earnings management. *The Accounting Review* 70(2), 193-225.

DeFond, M. L., Francis, J. R. and Wong T. J. (2000). Auditor industry specialization and market segmentation: Evidence from Hong Kong. *Auditing: A Journal of Practice & Theory* 19(1), 49–66.

Dhaliwal, D. S., Li, O. Z., Tsang, A. and Yang, Y. G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *The Accounting Review* 86(1), 59-100.

Diaz, J. (2000). Religion and gambling in sin-city: A statistical analysis of the relationship between religion and gambling patterns in Las Vegas residents. *The Social Science Journal* 37(3), 453–458.

Doran, C.J. and Natale, S. M. (2011). Empathia and caritas: The role of religion in fair trade consumption. *Journal of Business Ethics* 98(1), 1–15.

Duranton, G. and Puga, D. (2004). *Microfoundations of Urban Agglomeration Economies*. In Vernon Henderson and Jacques François Thisse (eds.) Handbook of Regional and Urban Economics, Volume 4. Amsterdam: North Holland, 2063–2117.

Dyreng, S. D., Mayew, W. J. and Williams, C. D. (2012). Religious social norms and corporate financial reporting. *Journal of Business Finance and Accounting* 39(7 and 8), 845–875.

Elster, J. (1989). Social norms and economic theory. *Journal of Economic Perspectives* 3(4), 99–117.

Ethridge, J., Marsh, T. and Revelt, B. (2007). Engagement risk: perceptions and strategies from audit partners. *Journal of Business and Economic Research* 5(4), 25–32.

Ferguson, A. and Stokes, D. (2002). Brand name audit pricing, industry specialization and leadership premiums post Big 8 and Big 6 mergers. *Contemporary Accounting Research* 19(1), 77–110.

Ferguson, A., Francis, J. and Stokes, D. (2003). The effects of firm-wide and office-level industry expertise on audit pricing. *The Accounting Review* 78(1), 429-448.

Festre, A. (2010). Incentives and social norms: A motivation-based economic analysis of social norms. *Journal of Economic Surveys* 24(3), 511–538.

Francis, B., Hasan, I., John, K. and Waisman, M. (2012). *Urban agglomeration and CEO compensation*. Bank of Finland Discussion Papers No. 17.

Francis, J. R. (1984). The effect of audit firm size on audit prices: A study of the Australian market. *Journal of Accounting and Economics* 6(2), 133–151.

Francis, J. R., Reichelt, K. and Wang, D. (2005). The pricing of national and city-specific reputations for industry expertise in the U.S. audit market. *The Accounting Review* 80(1), 113–136.

Francis, J.R. and Yu. M.D. (2009). Big 4 office size and audit quality. *The Accounting Review* 84(5), 1521-1552.

Fukukawa H., Mock, T. and Write, A. (2006). Audit programs and audit risk: a study of Japanese practice. *International Journal of Auditing* 10(1), 41-65.

Fung, S.Y.K., Gul, F.A. and Krishnan, J. (2012). City-level auditor industry specialization, economies of scale, and audit pricing. *The Accounting Review* 87(4), 1281-1307.

Gietzmann, M. and Pettinicchio A. (2014). External auditor reassessment of client business risk following the issuance of a comment letter by the SEC. *European Accounting Review* 23(1), 57-85.

Graham, L. and Bedard, J. (2003). Fraud risk and audit planning. *International Journal of Auditing* 7(1), 55-70.

Grullon, G., Kanatas, G. and Weston J. (2010). *Religion and corporate (mis)behavior*. Working Paper, Rice University.

Guiso, L., Sapienza, P. and Zingales, L. (2006). Does culture affect economic outcomes? *Journal of Economic Perspectives* 20(2), 23-48.

Gujarati, D. N. (1995). *Basic Econometrics*. New York: McGraw-Hill.

Gul, F. and Goodwin, J. (2010). Short-term debt maturity structures, credit ratings, and the pricing of audit services. *The Accounting Review* 85(3), 877-909.

Hay, C., Knechel, W. R. and Wong, N. (2006). Audit fees: A meta-analysis of the effect of supply and demand attributes. *Contemporary Accounting Research* 23(1), 141-191.

Hilary, G. and Hui, K. W. (2009). Does religion matter in corporate decision making in America? *Journal of Financial Economics* 93(3), 455-473.

Hood, R. W., Spilka, B., Hunsberger B. and Gorsuch, R. (1996). *The Psychology of Religion: An Empirical Approach*. New York: Guildford Press.

Hotelling, H. (1929). Stability in competition. *The Economic Journal* 39(153), 41–57.

Houston, R., Peters, M. and Pratt, J. (1999). The audit risk model, business risk and audit planning decisions. *The Accounting Review* 74(3), 281–298.

Huang, H.W., Liu L., Raghunandan, K. and Rama D. V. (2007). Auditor industry specialization, client bargaining power, and audit fees: Further evidence. *Auditing: A Journal of Practice and Theory* 26(1), 147–158.

Huang, H. W., Raghunandan, K. and Rama, D. (2009). Audit fees for initial audit engagements before and after SOX. *Auditing: A Journal of Practice and Theory* 28(1), 171-190.

Hunt, S. D. and Vitell, S. J. (1986). A general theory of marketing ethics. *Journal of Macromarketing* 8(6), 5–16.

ICCR,. (2010). Faith and finance: Finding common ground to protect the common good. Interfaith Center of Corporate Responsibility, Financial Services Sector Team, October, available at: http://www.iccr.org/sites/default/files/ICCRsFaithAndFinance10012010.pdf (accessed 15 December 2015).

ICCR,. (2011). ICCR's social sustainability resource quide: Building sustainable communities through multi-party collaboration, June. Available at http://www.iccr.org/publications/2011SSRG.pdf (accessed 2 April 2013).

ICCR,. (2015). Invested in change: faith-consistent investing in a climate-challenged world. Interfaith Center of Corporate Responsibility, April, available at http://www.iccr.org/invested-change-faith-consistent-investing-climate-challenged-world (accessed 15 December 2015).

Innaccone, L. (1998). Introduction to the economics of religion. *Journal of Economic Literature* 36(3), 1465–96.

Interfaith Declaration. (1994). An Interfaith Declaration: A Code of Ethics on International Business for Christians, Muslims, and Jews. Available at http://ethics.iit.edu/ecodes/node/5106 (accessed 15 December 2015).

Ivkovic, Z. and Weisbenner, S. (2005). Local does as local is: Information content of the geography of individual investors' common stock investments. *Journal of Finance* 60(1), 267-306.

Jaggi, B. and Xin. H. (2014). *Religiosity and audit fees*. Working Paper, Rutgers Business School.

Javers, E. (2011). Religion, Not Money, Often Motivates Corporate Whistleblowers. *CNBC*, Feb 12 availiable at http://www.cnbc.com/id/41494697 (accessed 15 December 2015.

Jensen, M.C. and Meckling, W. (1976). Theory of the firm: managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics* 3, 305-360.

Jha, A. and Chen, Y. (2015). Audit fees and social capital, *The Accounting Review* 90(2), 611-639.

Johnstone, K. (2000). Client-acceptance decisions: Simultaneous effects of client business risk, audit risk, auditor business risk, and risk adaptation. *Auditing: A Journal of Practice and Theory* 19(1), 1–25.

Kanagaretham, K., Lobo, G., and Wang, C. (2014). Religiosity and Earnings Management: International Evidence from the Banking Industry. *Journal of Business Ethics* published online, DOI 10.1007/s10551-014-2310-9.

Kaustia, M. and Torstila, S. (2011). Stock market aversion? Political preferences and stock market participation. *Journal of Financial Economics* 100(3), 98-112.

Kedia, S. and Rajgopal, S. (2011). Do the SEC's enforcement preferences affect corporate misconduct? *Journal of Accounting and Economics* 51(3), 259–78.

Keller, A.C., Smith, K.T. and Smith, L.M. (2007). Do gender, educational level, religiosity, and work experience affect the ethical decision-making of U.S. accountants? *Critical Perspectives on Accounting* 18(3), 299–314.

Kennedy, E.J. and Lawton, L. (1998). Religiousness and business ethics. *Journal of Business Ethics* 17(2), 163-175.

Kerr, S., Grupe, F., Jooste, S. and Vreeland, J. (2007). A case-based approach to the evaluation of new audit clients. *Journal of Computer Information Systems* 47(4), 19-27.

Khalil, S., Magnan, L. and Cohen, J. R. (2008). Dual-class shares and audit pricing: Evidence from the Canadian markets. *Auditing: A Journal of Practice and Theory* 27(2), 199-216.

Kohlberg, L. (1984). *Essays on moral development. The psychology of moral development*. 2nd Volume, San Francisco: Harper and Row.

Kose, J., Knyazeva, A. and Knyazeva, D. (2011). Does geography matter? Firm location and corporate payout policy. *Journal of Financial Economics* 101(3), 533–551.

Kothari, S.P., Leone, A.J. and Wasley, C.E. (2005). Performance matched discretionary accrual measures, *Journal of Accounting and Economics* 39(1), 163-197.

Kumar, A., Page, J. and Spalt, O. (2011). Religious beliefs, gambling attitudes and financial market outcomes. *Journal of Financial Economics* 102(3), 671-708.

Kurpis, V. L., Begiri, S., M., and Helgeson, G. J. (2008). The effects of commitment to moral self-improvement and religiosity on ethics of business students. *Journal of Business Ethics* 80(3), 447-463.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. (1999). The quality of government. *Journal of Law, Economics and Organization* 15(1), 222–279.

Larcker, D. and Richardson, S.A. (2004). Fees paid to audit firms, accrual choices, and corporate governance. *Journal of Accounting Research* 42(3), 625-658.

Lehrer, E. (2004). Religion as a determinant of economic and demographic behavior in the United States. *Population and Development Review* 30(4), 707–726.

Lemon, W.M., Tatum, K.W. and Turley, S. (2000). Developments in Audit Methodologies. London: ABG Professional Information.

Leventis, S., Iftekhar, H. and Dedoulis, E. (2013). The cost of sin: The effect of social norms on audit pricing. *International Review of Financial Analysis* 29(4), 153-166.

Leventis, S., Weetman, P. and Caramanis, C. (2011). Agency costs and product market competition: The case of audit pricing in Greece. *British Accounting Review* 43(2), 112-119.

Longenecker, J.G., McKinney, J.A. and Moore, C.W. (2004). Religious intensity, evangelical Christianity, and business ethics: An empirical study. *Journal of Business Ethics* 55(4), 373-386.

Loughran, T., and Schulz, P. (2005). Liquidity: Urban versus rural firms. *Journal of Financial Economics* 78(2), 341-374.

Lynn, M.L., Naughton, M.J. and VanderVeen, S. (2009). Faith at work scale (FWS): Justification, development, and validation of a measure of Judaeo-Christian religion in the workplace. *Journal of Business Ethics* 85, 227–243.

Lyon, J. and Maher, M., (2005). The importance of business risk in setting audit fees: Evidence from cases of client misconduct. *Journal of Accounting Research* 43 (1), 133–151.

Mayhew, B. W. and Wilkins, M. S. (2003). Audit firm industry specialization as a differentiation strategy: Evidence from fees charged to firms going public. *Auditing: A Journal of Practice & Theory* 22(2), 33–52.

Mazar, N., Amir, O. and Ariely, D. (2008). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of Marketing Research* 45(6), 633–644.

McAndrew, S. and Voas, D. (2011). Measuring religiosity using surveys. *Survey Question Bank: Topic Overview* 4 February, available at http://surveynet.ac.uk/sqb/topics/religion/sqb_religion_mcandrew_voas.pdf (accessed 15 December 2015).

McCullough, M. E. and Willoughby, B. L. B. (2009). Religion, self-regulation and self-control: Association, explanation and implications. *Psychological Bulletin* 135(1), 69-93.

McGuire, S. T., Omer, T. C. and Sharp, N. U. (2012). The impact of religion on financial reporting irregularities. *The Accounting Review* 87(2), 645-673.

Miller, A. and Hoffmann, J. (1995). Risk and religion: an explanation of gender differences in religiosity. *Journal for the Scientific Study of Religion* 34(1), 63–75.

Newport, F. (2012). *God is Alive and Well: The Future of Religion in America*. Gallup Press.

Niemi, L. (2002). Do firms pay for audit risk? Evidence on risk premiums in audit fees after direct control for audit effort. *International Journal of Auditing* 6(1), 37-51.

Norris, P. and Inglehart, R. (2004). *Sacred and secular religion and politics worldwide*. US: Cambridge University Press.

Numan, W. and Willekens, M. (2012). An empirical test of spatial competition in the audit market. *Journal of Accounting and Economics* 53(1-2), 450-465.

Omer, T. C., Sharp, N. Y. and Wang, D. (2015). *The impact of religion on the going concern reporting decisions of local audit practice offices.* Working Paper, Texas A&M University.

Osoba, B. (2003). *Risk preferences and the practice of religion: evidence from panel data*. Working Paper, West Virginia University.

Palmrose, Z. V. (1986). Audit fees and auditor size: Further evidence. *Journal of Accounting Research* 24(1), 97–110.

Peterson, A., R., Albaum, G., Merunka, D., and Smith, S., (2010). Effects of nationality, gender, and religiosity on business-related ethicality. *Journal of Business Ethics* 96(4), 573-587.

Pirinsky, C. and Wang, Q. (2006). Does corporate headquarters location matter for stock returns? *Journal of Finance* 61(4), 1991–2015.

Porter, M. E. (1998). Location, clusters, and the new 'micro' economics of competition. *Business Economics* 33(1), 7–13.

Porter, M. E. (2000). Location, competition, and economic development: Local clusters in the global economy. *Economic Development Quarterly* 14(1), 15–34.

Rashid, Z., and Ibrahim, S. (2008). The effect of culture and religiosity on business ethics: A cross-cultural comparison. *Journal of Business Ethics* 82(4), 907-917.

Reichelt, K.J. and Wang, D. (2010). National and office-specific measures of auditor industry expertise and effects on audit quality. *Journal of Accounting Research* 48(3), 647-686.

RLS, 2007. *Religious landscape Survey*, available at http://religions.pewforum.org/pdf/report2religious-landscape-study-appendix4.pdf (accessed 15 December 2015).

Roberts, K., and Yamane, D. A. (2012). *Religion in sociological perspective*. Sage Publications, United Kingdom.

Rogers, W. (1993). Regression standard errors in clustered samples. *Stata Technical Bulletin* 13, 19–23.

Rubbin, A. (2008). Political views and corporate decision making: The case of corporate social responsibility. *The Financial Review* 43(3), 337-360.

Securities and Exchange Commission. (2000). *Final rule: Revision of the Commission's auditor independence requirements*, 17 CFR Parts 210 and 240, Washington, DC.

Shukor, A. and Jamal, A. (2013). Developing scales for measuring religiosity in the context of consumer research. *Middle-East Journal of Scientific Research* 13, 69-74.

Simunic, D. (1980). The pricing of audit services: Theory and evidence. *Journal of Accounting Research* 18(1), 161-190.

Smith, A. (1976). *Theory of Moral Sentiments*. Indianapolis: Liberty Classics.

Stulz, R. and Williamson, R. (2003). Culture, openness, and finance. *Journal of Financial Economics* 70(3), 313–349.

Sunder, S. (2005). Minding our manners: Accounting as social Norms. *The British Accounting Review* 37(4), 367-387.

Sunstein, C. R. (1996). Social norms and social rules. *Columbia Law Review* 96(4), 903–968.

Thomas, C. R. (1992). Should the client be accepted?. *The CPA Journal*, November. Online at: www.nysscpa.org/cpajournal/old/13856825.htm (accessed 16 February 2013).

Tirole, J. (1988). *The theory of industrial organization*. Cambridge: The MIT Press.

Tracy, P. (2012). Religion and organization: A critical review of current trends and future directions. *The Academy of Management Annals* 6(1), 87-134.

Venkataraman, R., Weber, J. and Willenborg, M. (2008). Litigation risk, audit quality, and audit fees: Evidence from initial public offerings. *Accounting Review* 83(5), 1315-1345.

Vitell, S. J. (2009). The Role of religiosity in business and consumer ethics: A review of the literature. *Journal of Business Ethics* 90(2), 155-167.

Walker, A.G., Smither J.W. and Debode, J. (2012). The effects of religiosity on ethical judgments. *Journal of Business Ethics* 106(4), 437–452.

Weaver, G. and Agle, B. (2002). Religiosity and ethical behavior in organizations: A symbolic interactionist perspective. *Academy of Management Review* 27(1), 77–97.

Weber, M. (1905). *The Protestant Ethic and the Spirit of Capitalism*. London: Allen & Unwin.

Webley, S., (1996). The Interfaith Declaration. Constructing a code of ethics for international business. *Business Ethics: A European Review*, 5(1), 52-54.

Zwingmann, C., Klein, C. and Bussing, A. (2011). Measuring religiosity/spirituality: Theoretical differentiations and categorization of instruments. *Religions* 2, 345-357.

Table 1: Variable Definitions

Dependent variable	
AF	natural logarithm of audit fees
Independent variables – Religiosity measures	
REL	number of adherents in the county in which the firm is headquartered, as reported by the RMCS 2000 and 2010 studies, divided by the county population as per the US Census
IMP	importance of religion, based on the US Religious Landscape Survey
WOR	worship attendance frequency, based on the US Religious Landscape Survey
FRP	frequency of prayer, based on the US Religious Landscape Survey
BEL	belief in God, based on the US Religious Landscape Survey
Control variables	
SIZE	natural logarithm of total assets
LIT	dummy coded 1 if a firm has material legal proceedings, 0 otherwise
SEG	natural logarithm of number of business segments
CUR	ratio of current assets to total assets
ROA	return on total assets
LEV	ratio of long-term debt to total assets
BETA	market risk, relationship between stock volatility and the market volatility
LOSS	dummy coded 1 if a firm's net income in prior year is < 0, 0 otherwise
AGE	natural logarithm of company age
NYSE	dummy coded 1 if a firm is listed on the NYSE, 0 otherwise
PMC	product market competition
AUDC	dummy coded 1 if the auditor changed compared to prior year, 0 otherwise
FIS	dummy coded 1 if fiscal year end is in December, 0 otherwise
SPEC	dummy coded 1 if the audit firm owns the largest fee market share in an audit market, 0 otherwise. An audit market is defined as a 2-digit SIC industry in a county.
GCON	dummy coded 1 if a firm has a going concern qualification, 0 otherwise
RUR	dummy coded 1 if a firm is headquartered in an rural area, 0 otherwise
POP	natural logarithm of population per state
MALE	ratio of male population to state population
MINO	ratio of minority population to state population
WAG	natural logarithm of average wage per state
IPS	fees an audit firm generates in a 2-digit SIC industry as a percentage of the total fees generated by an audit firm in a US Metropolitan Statistical Area (MSA)
DIS	smallest absolute fee market share difference between the incumbent auditor and their closest competitor in an audit market. An audit

	market is defined as a 2-digit SIC industry in an MSA
HER	Herfindahl concentration index per audit market. The Herfindahl index is calculated as $X = \sum_{i=1}^{n} s_i^2$ where *i* is an audit office in an audit market, and *s* is the market share in an audit market based on audit fees.
IPSN	fees an audit firm generates in a 2-digit SIC industry as a percentage of the total fees generated by an audit firm nationwide

Table 2: County Religiosity (REL) Descriptive Statistics

Panel A: Religious adherence in the Religious Congregations and Membership Study (RCMS) for years 2000 and 2010 for the 335 counties where sample firm headquarters reside

Year	N	Mean	St. Dev	P50
2000	335	0.510	0.126	0.504
2010	335	0.495	0.125	0.485

Panel B: Ten most and ten least religious (REL) states

Rank	State	Weighted Average (by County Population) Religious Adherence by State
1	Utah	0.828
2	North Dakota	0.688
3	Oklahoma	0.683
4	Mississippi	0.630
5	Massachusetts	0.621
6	South Dakota	0.614
7	Illinois	0.581
8	New Jersey	0.575
9	Idaho	0.570
10	Louisiana	0.563
.		.
.		.
.		.
39	Wyoming	0.408
40	West Virginia	0.399
41	Vermont	0.396
42	Colorado	0.378
43	Alaska	0.359
44	Oregon	0.339
45	Washington	0.331
46	Maine	0.326
47	Arizona	0.303
48	Nevada	0.294

Figure 1: Religiosity (REL) across US States

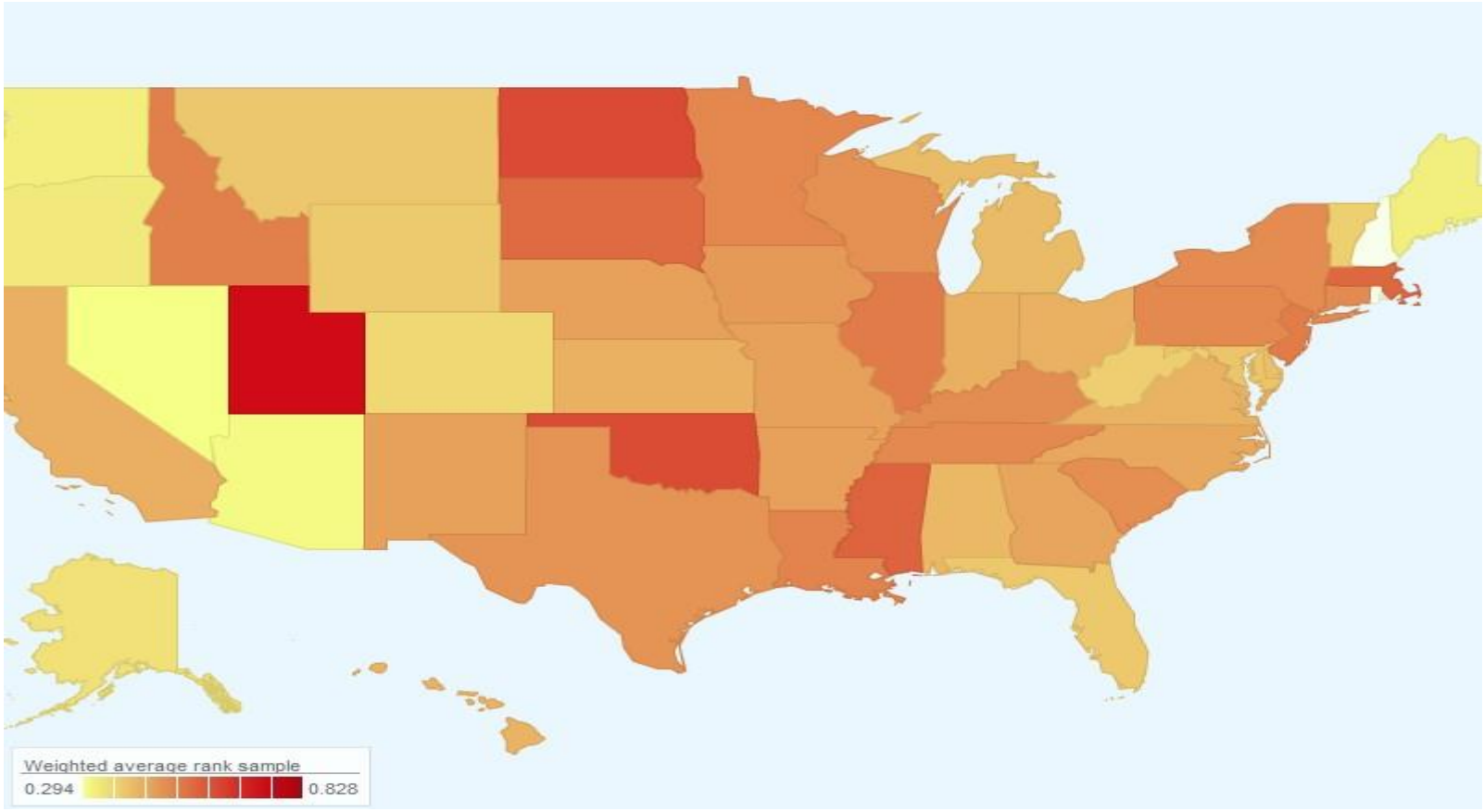

Table 3: Descriptive Statistics

	N	Mean	StDev	Min	Median	Max
Dependent Variable						
AF	10,176	13.85	1.40	8.55	13.92	18.23
AF in $ (,000)	10,176	2,545.00	4,384.00	5.20	1,112.00	83,334.00
Independent Variables						
REL	10,176	.520	.106	.199	.527	.913
IMP	1,272	.551	.091	.360	.540	.600
WOR	1,272	.385	.071	.220	.370	.600
FRP	1,272	.567	.078	.400	.560	.770
BEL	1,272	.703	.073	.540	.710	.910
Control Variables						
SIZE	10,176	6.59	2.31	3.75	6.78	12.61
LIT	10,176	.205	.404	0	0	1
SEG	10,176	.755	.702	0	.895	2.30
CUR	10,176	2.06	1.50	.002	1.69	14.54
ROA(%)	10,176	2.55	10.66	-49.90	4.139	48.92
LEV(%)	10,176	27.33	20.73	1.01	24.34	149.98
BETA	10,176	1.26	.794	.19	1.20	8.94
LOSS	10,176	.254	.435	0	0	1
AGE	10,176	3.19	.871	0	3.13	5.26
NYSE	10,176	.518	.499	0	1	1
PMC	10,176	.072	.076	.010	.043	.412
AUDC	10,176	.062	.242	0	0	1
FIS	10,176	.673	.468	0	1	1
SPEC	10,176	.050	.219	0	0	1
GCON	10,176	.032	.176	0	0	1
RUR	10,176	.375	.484	0	0	1
POP	10,176	16.10	.842	8.92	13.09	17.43
MALE	10,176	.491	.006	.480	.490	.520
MINO	10,176	.244	.090	.020	.250	.760
WAG	10,176	10.67	.160	9.95	10.20	11.01
IPS	10,176	.391	.276	.001	.321	.911
DIS	10,176	.368	.283	.001	.372	.985
HER	10,176	.558	.192	.110	.525	.996
IPSN	10,176	.081	.045	.001	.085	.095

Variables are described in Table 1

Table 4: Pearson Correlation Matrixes

Panel A: Pearson correlation matrix between AF, REL and control variables (*n = 10,176*)

VAR	AF	REL	SIZE	LIT	SEG	CUR	ROA	LEV	BETA	LOSS	AGE	NYSE	PMC	AUDC	FIS	SPEC	GCON	RUR	POP	MALE	MINO	WAG	IPS	DIS	HER	IPSN
AF	1.000																									
REL	-0.03*	1.000																								
SIZE	0.87*	-0.02	1.000																							
LIT	0.36*	-0.01	0.36*	1.000																						
SEG	0.43*	0.02	0.38*	0.12*	1.000																					
CUR	-0.15*	-0.02*	-0.17*	-0.07*	-0.12*	1.000																				
ROA	0.18*	0.02*	0.25*	0.06*	0.09*	-0.05*	1.000																			
LEV	-0.01	-0.03*	0.03*	-0.02*	-0.02*	-0.22*	-0.17*	1.000																		
BETA	0.06*	-0.02*	0.01	-0.01	-0.03*	0.06*	-0.13*	0.03*	1.000																	
LOSS	-0.26*	-0.02*	-0.36*	-0.06*	-0.16*	0.06*	-0.57*	0.17*	0.13*	1.000																
AGE	0.20*	-0.01	0.19*	0.06*	0.19*	-0.04*	0.12*	-0.12*	-0.06*	-0.15*	1.000															
NYSE	0.57*	0.05*	0.55*	0.19*	0.33*	-0.21*	0.20*	0.03*	0.01*	-0.28*	0.18*	1.000														
PMC	0.02*	0.01	0.05*	-0.01	-0.02*	-0.04*	0.07*	-0.01	0.03*	-0.08*	0.02	0.04*	1.000													
AUDC	-0.18*	0.01	-0.19*	-0.04*	-0.06*	0.02*	-0.07*	0.02	0.01	0.09*	-0.04*	-0.12*	-0.02*	1.000												
FIS	0.09*	-0.01	0.09*	0.02*	0.11*	-0.04*	-0.02*	0.13*	0.01	0.01*	-0.09*	0.10*	-0.08*	0.01	1.000											
SPEC	0.20*	-0.02*	0.19*	0.11*	0.05*	-0.01*	0.00	-0.01	0.04*	-0.01	-0.02*	0.10*	0.15*	-0.05*	0.02*	1.000										
GCON	0.28*	0.01	-0.37*	-0.05*	-0.13*	-0.13*	-0.22*	0.14*	-0.04*	0.28*	-0.07*	-0.17*	-0.06*	0.09*	0.01	-0.03*	1.000									
RUR	-0.08*	-0.02*	-0.04*	-0.02	0.00	-0.06*	-0.02*	0.04*	-0.02*	0.01*	0.01	-0.04*	0.02*	0.00	-0.01	-0.03*	0.02	1.000								
POP	0.07*	-0.02*	0.01	0.02*	-0.05*	0.07*	-0.02*	-0.08*	0.05*	0.05*	-0.04*	-0.01	-0.03*	-0.01	0.01	0.11*	0.01	-0.27*	1.000							
MALE	-0.02*	-0.30*	-0.02*	-0.03*	-0.02*	-0.01	-0.04*	0.04*	0.05*	0.06*	-0.02*	-0.04*	0.01	-0.01	0.01	0.03*	0.04*	0.11*	0.09*	1.000						
MINO	0.05*	-0.01	-0.01	0.02*	-0.07*	0.08*	-0.03*	-0.01	0.01	0.07*	-0.07*	-0.07*	-0.03*	0.02	0.01*	0.07*	0.01*	-0.08*	0.55*	0.01	1.000					
WAG	0.13*	0.13*	0.00	0.01	0.00	0.11*	-0.05*	-0.06*	0.01	0.08*	0.08*	-0.07*	-0.07*	0.01	0.01	0.05*	-0.01	-0.20*	0.38*	-0.08*	0.43*	1.000				
IPS	0.25*	-0.11*	0.31*	0.09*	0.15*	-0.09*	0.12*	0.05*	-0.01*	-0.18*	0.13*	0.22*	0.25*	-0.11*	-0.01	0.09*	-0.13*	0.14*	-0.25*	-0.02*	-0.21*	-0.29*	1.000			

DIS	0.03*	-0.10*	0.07*	0.01	0.05*	-0.07*	0.07*	0.05*	-0.04*	-0.11*	0.09*	0.07*	0.26*	-0.04*	-0.04*	-0.01	-0.03*	0.15*	-0.28*	-0.04*	-0.23*	-0.31*	0.55*	1.000	
HER	0.01*	-0.12*	0.10*	0.01	0.06*	-0.08*	0.09*	0.05*	-0.03*	-0.14*	0.11*	0.08*	0.28*	-0.05*	-0.04*	-0.02*	-0.05*	0.16*	-0.31*	-0.04*	-0.26*	-0.33*	0.45*	0.75*	1.000	
IPSN	0.51*	-0.02*	0.55*	0.17*	0.22*	-0.09*	0.13*	0.03*	0.02*	-0.21*	0.08*	0.39*	0.19*	-0.19*	-0.01	0.29*	-0.21*	-0.03*	-0.03*	-0.06*	-0.04*	-0.07*	0.34*	0.14*	0.16*	1.000

Values with asterisk denote that the coefficient is significant at a significance level of 10%.

Panel B: Pearson correlation matrix between AF, IMP, WOR, FRP, BEL and control variables (*n = 1,272*)

VAR	AF	IMP	WOR	FRP	BEL	SIZE	LIT	SEG	CUR	ROA	LEV	BETA	LOSS	AGE	NYSE	PMC	AUDC	FIS	SPEC	GCON	RUR	POP	MALE	MINO	WAG
AF	1.000																								
IMP	-0.04*	1.000																							
WOR	-0.05*	0.95*	1.000																						
FRP	-0.05*	0.97*	0.91*	1.000																					
BEL	-0.04*	0.95*	0.92*	0.92*	1.000																				
SIZE	0.87*	0.05*	0.04*	0.05*	0.07*	1.000																			
LIT	0.36*	-0.03*	-0.02	-0.04*	-0.03*	0.36*	1.000																		
SEG	0.43*	-0.02	-0.02	-0.02	0.01	0.38*	0.12*	1.000																	
CUR	-0.15*	-0.10*	-0.09*	-0.09*	-0.11*	-0.17*	-0.07*	-0.12*	1.000																
ROA	0.18*	0.04*	0.04*	0.02	0.07*	0.25*	0.06*	0.09*	-0.05*	1.000															
LEV	-0.01	0.02	0.02	0.02	0.02	0.03*	-0.02*	-0.02*	-0.22*	-0.17*	1.000														
BETA	0.06*	-0.08*	-0.10*	-0.06*	-0.09*	0.01	-0.01	-0.03*	0.06*	-0.13*	0.03*	1.000													
LOSS	-0.26*	-0.07*	-0.06*	-0.05*	-0.10*	-0.36*	-0.06*	-0.16*	0.06*	-0.70*	0.17*	0.13*	1.000												
AGE	0.20*	-0.06*	-0.05*	-0.07*	-0.03	0.19*	0.06*	0.19*	-0.04*	0.12*	-0.12*	-0.06*	-0.15*	1.000											
NYSE	0.57*	0.12*	0.12*	0.10*	0.13*	0.56*	0.19*	0.33*	-0.21*	0.20*	0.03*	0.01*	-0.28*	0.18*	1.000										
PMC	0.02*	0.11*	0.10*	0.11*	0.11*	0.05*	-0.01	-0.02*	-0.04*	0.07*	-0.01	0.03*	-0.08*	0.02	0.04*	1.000									
AUDC	-0.18*	-0.01	-0.02	0.01	-0.01	-0.19*	-0.04*	-0.06*	0.02*	-0.07*	0.02	0.01	0.09*	-0.04*	-0.12*	-0.02*	1.000								
FIS	0.09*	0.04*	0.02	0.04*	0.03*	0.09*	0.02*	0.11*	-0.04*	-0.02*	0.13*	0.01	0.01*	-0.09*	0.10*	-0.08*	0.00	1.000							
SPEC	0.20*	-0.02	-0.02	-0.01	-0.04*	0.19*	0.11*	0.05*	-0.01*	0.00	-0.01	0.04*	-0.01	-0.02*	0.10*	0.15*	-0.05*	0.02*	1.000						
GCON	-0.28*	0.02	0.02	0.02	0.01	-0.37*	-0.05*	-0.13*	-0.13*	-0.22*	0.14*	-0.04*	0.28*	-0.07*	-0.17*	-0.06*	0.09*	0.01	-0.03*	1.000					
RUR	-0.08*	0.06*	0.07*	0.05*	0.06*	-0.04*	-0.02	0.01	-0.06*	-0.02*	0.04*	-0.02*	0.01*	0.01	-0.04*	0.02*	0.01	-0.01	-0.03*	0.02	1.000				
POP	0.07*	-0.03	-0.08*	-0.02	-0.14*	0.01	0.02*	-0.05*	0.07*	-0.02*	-0.08*	0.05*	0.05*	-0.04*	-0.01	-0.03*	-0.01	0.01	0.11*	0.01	-0.27*	1.000			

MALE	-0.02*	0.05*	0.02	0.10*	-0.04*	-0.02*	-0.03*	-0.02*	-0.01	-0.04*	0.04*	0.05*	0.06*	-0.02*	-0.04*	0.01	-0.01	0.01	0.03*	0.04*	0.11*	0.09*	1.000		
MINO	0.05*	0.08*	-0.01	0.11*	-0.09*	-0.01	0.02*	-0.07*	0.08*	-0.03*	-0.01	0.01	0.07*	-0.07*	-0.07*	-0.03*	0.02	0.01*	0.07*	0.01	-0.08*	0.55*	0.01	1.000	
WAG	0.13*	-0.62*	-0.59*	-0.65*	-0.72*	0.01	0.01	0.01	0.11*	-0.05*	-0.06*	0.01	0.08*	0.08*	-0.07*	-0.07*	0.01	0.01	0.05*	-0.01	-0.20*	0.38*	-0.08*	0.43*	1.000

Note: Values with asterisk denote that the coefficient is significant at a significance level of 10%.

Table 5: Audit Fee and Religiosity Measures

Variables	Exp. Sign	REL	IMP	WOR	FRP	BEL
(Constant)		2.45	13.11	11.07	12.96	16.09
		(15.03)***	(20.36)***	(30.20)***	(26.35)***	(24.24)***
Religiosity	-	-.251	-1.10	-1.14	-1.25	-1.60
		(-7.33)***	(-8.19)***	(-10.82)***	(-6.60)***	(-9.92)***
SIZE	+	.531	.536	.536	.536	.535
		(33.69)***	(9.93)***	(9.66)***	(9.48)***	(9.50)***
LIT	+	.151	.172	.174	.170	.173
		(28.44)***	(7.44)***	(7.77)***	(7.58)***	(7.42)***
SEG	+	.196	.194	.192	.194	.196
		(16.98)***	(8.02)***	(8.05)***	(8.31)***	(7.91)***
CUR	-	-.006	-.006	-.006	-.005	-.006
		(-11.67)***	(-0.51)	(-.47)	(-.45)	(-.51)
ROA	-	-.001	-.001	-.001	-.001	.001
		(-1.20)	(-0.15)	(-.19)	(-.17)	(.03)
LEV	+/-	-.002	-.001	-.001	-.001	-.001
		(-4.64)***	(-1.06)	(-1.16)	(-1.06)	(-1.01)
BETA	+/-	.116	.088	.089	.090	.089
		(5.96)***	(10.75)***	(10.45)***	(9.05)***	(10.66)***
LOSS	+	.131	.170	.172	.172	.168
		(30.74)***	(2.68)***	(2.68)***	(2.75)***	(2.70)***
AGE	-	.015	.019	.019	.020	.022
		(1.01)	(24.93)***	(7.30)***	(32.37)***	(22.68)***
NYSE	+	.051	.074	.072	.070	.075
		(2.00)**	(9.90)***	(7.28)***	(7.16)***	(7.98)***
PMC	+	1.87	13.71	13.53	13.51	13.68
		(8.66)***	(3.64)***	(3.76)***	(3.72)***	(3.72)***
AUDC	+/-	-.104	-.190	-.190	-.188	-.193
		(-2.47)***	(-3.65)***	(-3.80)***	(-3.49)***	(-3.57)***
FIS	+	.004	-.036	-.041	-.035	-.037
		(.52)	(-.53)	(-.61)	(-.51)	(-.56)
SPEC	+	.115	.085	.089	.087	.086
		(9.75)***	(2.48)**	(2.65)**	(2.54)**	(2.48)**
GCON	+	.144	.098	.100	.096	.097
		(5.41)***	(.57)	(.59)	(.56)	(.57)
RUR	-	-.076	-.085	-.068	-.098	-.094
		(-3.66)***	(-1.49)	(-1.32)	(-1.94)**	(-1.87)*
POP	+	.039	.062	.059	.059	.065
		(25.33)	(2.10)**	(2.04)**	(2.03)**	(2.24)**
MALE	?	-3.37	-9.08	-8.67	-8.31	-11.24
		(-1.83)*	(-3.91)***	(-3.72)***	(-3.91)***	(-5.29)***
MINO	?	.014	.439	.228	.481	.330
		(.11)	(6.17)***	(3.11)***	(20.06)***	(6.22)***
WAG	+	.768	.046	.211	.036	-.087

	(7.38)***	(.55)	(2.49)**	(.21)	(-.78)
Industry dummies	included	included	included	included	included
Year dummies	included	included	included	included	included
N	10,176	1,272	1,272	1,272	1,272
F	685.30	94.00	93.65	93.63	94.07
Prob > F	.000	.000	.000	.000	.000
Adj R^2	83.91	83.24	83.20	83.19	83.26

Note: *t*-statistics are in parenthesis. *, ** and *** indicate significance at the 10%, 5% and 1% level respectively (2-tailed).

Table 6: Audit Fee, Religiosity (REL) and Measures of Spatial Competition

Variables	Exp. Sign	Coef	Coef
(Constant)		34.23	2.68
		(6.23)***	(9.10)***
REL			-.217
	-		(-3.74)***
IPS		.482	.532
	+	(7.90)***	(9.30)***
DIS		.276 ***	.187
	+	(4.32)***	(2.63)***
DIS*IPS		-.220	-.248
	-	(-5.26)***	(-4.80)***
HER		-.769	-.490
	?	(-10.85)***	(-9.79)***
IPSN	+	.473	.440
		(12.73)***	(7.68)***
SIZE	+	.510	.505
		(19.86)***	(19.99)***
LIT	+	.169	.156
		(19.62)***	(15.72)***
SEG	+	.182	.189
		(11.94)***	(15.87)***
CUR	-	-.003	-.008
		(-.16)	(-9.54)***
ROA	-	-.001	-.001
		(-1.66)	(-1.16)
LEV	+/-	-.002	-.002
		(-6.11)***	(-4.09)***
BETA	+/-	.107	.113
		(8.15)***	(6.31)***
LOSS	+	.138	.130
		(22.38)***	(17.32)***
AGE	-	.025	.015
		(2.03)**	(1.03)
NYSE	+	.014	.033
		(.77)	(1.47)
PMC	+	1.72	1.85
		(5.15)***	(6.54)***
AUDC	+/-	-.070	-.068
		(-1.91)*	(-1.63)
FIS	+	.013	.006
		(1.56)	(.53)
GCON	+	.124	.149
		(3.31)***	(4.11)
RUR	-		-.078

			(-4.15)***
POP	+		.044
			(15.40)***
MALE	?		-3.65
			(-2.56)**
MINO	?		-.006
			(-.06)
WAG			.760
	+		(8.43)***
Industry dummies		included	included
Year dummies		included	included
N		10,176	10,176
F		648.71	637.88
Prob > F		.000	.000
Adj R^2		83.61	84.40

Note: *t*-statistics are in parenthesis. *, ** and *** indicate significance at the 10%, 5% and 1% level respectively (2-tailed).

Table 7: Audit Fee and Religiosity (REL): Audit Industry Expertise

Variables	Exp. Sign	State Expert	State Non-Expert	National Expert	MSA Expert	County Expert
(Constant)		1.46	1.83	2.20	2.51	2.49
		(4.13)***	(4.38)***	(9.19)***	(16.60)***	(16.07)***
REL	-	-.474	-.259	-.252	-.259	-.255
		(-14.20)***	(-6.79)***	(-7.38)***	(-8.01)***	(-7.32)***
SIZE	+	.477	.532	.531	.530	.528
		(36.87)***	(31.87)***	(38.29)***	(32.65)***	(30.73)***
LIT	+	.166	.144	.155	.148	.147
		(39.59)***	(37.29)***	(30.26)***	(27.57)***	(26.64)***
SEG	+	.243	.188	.194	.195	.194
		(30.17)***	(16.69)***	(16.97)***	(17.19)***	(17.69)***
CUR	-	-.019	-.006	-.006	-.005	-.006
		(-10.45)***	(-11.57)***	(-8.50)***	(-9.29)***	(-10.68)***
ROA	-	.001	-.002	-.001	-.001	-.001
		(13.96)***	(-1.67)*	(-1.34)	(-1.24)***	(-1.13)
LEV	+/-	-.001	-.002	-.002	-.002	-.002
		(-13.72)***	(-4.85)***	(-5.08)***	(-4.29)***	(-4.27)***
BETA	+/-	.103	.118	.116	.115	.115
		(7.75)***	(5.24)***	(5.84)***	(6.02)***	(6.13)***
LOSS	+	.208	.123	.134	.130	.130
		(7.51)***	(18.11)***	(27.02)***	(36.85)***	(36.58)***
AGE	-	-.019	.017	.014	.014	.015
		(9.30)***	(1.09)	(.95)	(.97)	(.98)
NYSE	+	.179	.045	.046	.049	.048
		(4.51)***	(1.70)*	(1.83)*	(1.88)*	(1.85)*
PMC	+	2.06	1.88	1.90	1.83	1.82
		(9.50)***	(8.62)***	(8.59)***	(8.84)***	(9.26)***
AUDC	+/-	-.020	-.107	-.101	-.105	-.106
		(-.39)	(-2.22)**	(-2.33)**	(-2.47)**	(-2.50)**
FIS	+	.050	.002	.007	.002	.005
		(11.06)***	(.23)	(.92)	(.46)	(.68)
SPEC	+			.063	.183	.259
				(5.94)***	(11.36)***	(12.64)***
GCON	+	.235	.149	.149	.140	.139
		(2.60)***	(5.77)***	(4.79)***	(5.47)***	(5.45)***
RUR	-	.109	-.081	-.076	-.077	-.076
		(.52)	(-4.39)***	(-3.48)**	(-3.86)***	(-4.00)***
POP	+	.057	.037	.043	.040	.040
		(12.90)***	(25.67)***	(17.23)***	(19.16)***	(20.21)***
MALE	?	-21.63	-2.08	-3.06	-3.15	-3.17
		(8.37)***	(-1.42)	(-1.74)*	(-1.80)*	(-1.82)*
MINO	?	1.08	.032	.017	.018	.018

		(4.32)***	(.23)	(.14)	(.15)	(.15)
	WAG	1.96	.771	.769	.751	.755
	+	(11.94)***	(6.92)***	(7.35)***	(7.66)***	(7.63)***
	Industry dummies	included	included	included	included	included
	Year dummies	included	included	included	included	included
	N	720	9,456	10,176	10,176	10,176
	F	62.55	591.59	646.38	649.22	651.96
	Prob > F	.000	.000	.000	.000	.000
	Adj R^2	86.04	83.39	83.91	83.97	84.03

Note: *t*-statistics are in parenthesis. *, ** and *** indicate significance at the 10%, 5% and 1% level respectively (2-tailed).

Endnotes

[1] We employ the term religiosity for reasons of consistency with the growing branch of literature on accounting and finance (see, for instance, Hilary and Hui, 2009; Vitell, 2009; Dyreng et al., 2012).

[2] This is, *inter alia*, due to: the dominant influence of Islam in the Middle East and the expansionist tendencies of both Islam and Christianity in Africa; the continuous growth of Protestantism in Latin America; and the religious ferments in Eastern Europe and former Soviet Union states. In the US, there is a steady increase in religious denominations and churches as reported in the Religious Congregations and Membership Studies, while the role of Evangelist Christianity becomes more politically influential (Innaccone, 1998; Norris and Inglehart, 2004).

[3] Such attitudes have been facilitated by influential, organized religious groups which have cooperated to develop common religious doctrines and codes of conduct that offer practical guidance to those involved in business (Brammer et al., 2007; ICCR; 2011).

[4] This is not to say that one has to be religious in order to have the ability and capacity to expose unaccepted business practices (i.e., that higher religious adherence increases the possibility of revealing malpractice).

[5] Including, *inter alia*, Quest Diagnostics Inc. and GlaxoSmithKline.

[6] Auditing standards, guidelines and professional writings prescribe that an auditor's engagement decision should be based upon a thorough assessment of the client which is termed "engagement risk" (Bedard et al., 2008; Danziger, 1999; Ethridge et al., 2007; Kerr et al., 2007; Thomas, 1992; see also SAS No. 109, AU Section 314: Understanding the Entity and Its Environment (http://www.aicpa.org/Research/Standards/AuditAttest/Pages/SAS.aspx., accessed 15 December 2015). An essential component of engagement risk is the client's business risk which, *inter alia*, comprises an assessment of the integrity and attitudes of management, as well as an assessment of the client's broader environment along with corporate investment risk.

[7] We define corporate headquarters based on the business address rather than the address of incorporation, both provided by Audit Analytics. We do so to avoid the Delaware effect, i.e. incorporation for tax purposes at Delaware, as suggested by prior literature (see Allen and Woodland 2010).

[8] See official site at www.thearda.com (accessed 16 December 2015).

[9] This refers mainly to Christianity but incorporates all major organized religious groups, *inter alia* Baha'i, Buddhism, Christianity, Hinduism, Islam, Jainism, Judaism, Sikhism, Taoism and Zoroastrianism.

[10] Please see official site at http://www.pewforum.org/2009/12/21/how-religious-is-your-state/ (accessed 16 December 2015).

[11] The US Religious Landscape Survey completed telephone interviews with a nationally-representative sample of 35,957 adults living in the US who had a home telephone. The survey was conducted by Princeton Survey Research Associates International (PSRAI). Interviews were conducted in English and Spanish by Princeton Data Source, LLC (PDS), and Schulman, Ronca and Bucuvalas, Inc. (SRBI) from May 8 to August 13, 2007. Statistical results are weighted to correct known demographic discrepancies. Interviewees belong to various religions but the principal ones are: Evangelical, Protestant, Catholic, Mormon, Orthodox, Jehovah's Witness, Jewish, Muslim, Buddhist and Hindu.

[12] According to SEC §229.103, "major" constitutes a proceeding that, exclusive of interest and costs, exceeds 10% of the current assets of the company and its subsidiaries on a consolidated basis, and/or a proceeding that refers to sanctions for environmental damages that exceed $100,000.

[13] We have estimated the specialization proxies based on all yearly observations derived from Audit Analytics that had the minimum information to estimate specialization proxies (i.e. audit fees, name of auditor, location). This included, on average, around 9,000 observations per year.

[14] Please see official site at http://www.census.gov/acs/www/ (accessed 16 December 2015).

[15] Please see official site at http://www.bls.gov/ (accessed 16 December 2015).

[16] Estimated as 22% * 2,545,000 (2,545,000 is the average audit fees obtained from Table 3).

[17] Our expertise proxies refer to 60 SIC-2 industries, 48 states, 335 counties and 87 MSAs which are comparable to prior studies (Francis et al., 2005; Reichelt and Wang, 2010; Fung et al., 2012).

[18] Please see official site at http://www.uschamber.com (accessed 16 December 2015).

[19] We are grateful to Arthur Allen for providing directions and data on the estimation of the 150-hour rule.